UNIVERSITY OF SCRANTON CATALOG 1977 - 1978

COLLEGE OF ARTS AND SCIENCES

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University of Scranton
College of Arts and Sciences 1977/1978

UNIVERSITY OF SCRANTON
COLLEGE OF ARTS AND SCIENCES
CALENDAR 1977-1978

FALL SEMESTER
1977

September 4-6 (Sun-Tues)	Freshman Orientation
September 7 (Wed)	Classes begin
September 13 (Tues)	Final day for change of course and late registration
October 15 (Sat)	End of first quarter
Oct. 31-Nov. 1 (Mon-Tues)	Holidays—No classes
November 23 (Wed)	Thanksgiving holidays begin after last class
November 28 (Mon)	Classes resume
December 14-22 (Wed-Thurs)	Semester Examinations
December 22 (Thurs)	Christmas recess begins after last exam

INTERSESSION
JANUARY 1978

December 27-30 (Tues-Fri)	Registration
January 3 (Tues)	Classes begin
January 4 (Wed)	Final day for change of course and late registration
January 20 (Fri)	Holiday
February 3-4 (Fri-Sat)	Final Examinations

SPRING SEMESTER
1978

February 8 (Wed)	Classes begin
February 14 (Tues)	Final day for late registration and change of course
March 22 (Wed)	End of third quarter — Easter holidays begin after last class
March 28 (Tues)	Classes resume
May 15-23 (Mon-Tues)	Final Examinations
May 28 (Sun)	Commencement

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University of Scranton

A Jesuit and Coeducational College of Arts and Sciences 1977/1978

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UNIVERSITY
OF
SCRANTON

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WHAT THE UNIVERSITY BRINGS TO THE STUDENT

WHAT THE UNIVERSITY BRINGS TO THE STUDENT

In an era when higher education is characterized by public institutions often of 40,000 students or more, the College of Arts and Sciences of the University of Scranton is a private, independent liberal arts college of 2,400 students.

At a time when students on many campuses are herded into the anonymity of 300-seat auditoriums and lecture halls, the largest classroom at the University of Scranton seats 60. At Scranton the accent is on community and communication—not anonymity.

At a time when many private schools are experiencing a decline in enrollment, the College of Arts & Sciences at the University of Scranton has enjoyed an 80 percent growth in student enrollment over the last five years. It is one of the fastest growing colleges in America.

At a moment when teaching in the multiversities has been abandoned to graduate students, at the University of Scranton the faculty teaches. Indeed, it is a tradition that the chief administrative officer—the Dean—in each of the three colleges which comprise the University teaches at least one course each semester. At Scranton, teaching, and great teaching at that, holds primacy.

But even more fundamentally, the crisis on American college campuses as in American society in recent years concerns the question of values. Students charge that American educational institutions have no values. The universities are silent—not only on the issues of the hour, but on the enduring issues as well.

Much of what follows in this bulletin attempts to convey by word and image that the University of Scranton does indeed possess its own values and to indicate to you what these values are. We prefer to fly our colors.

HERITAGE AND VALUES

The University is changing. In response to historical events and educational developments we are in the process of becoming a different institution from what we were last semester or last year. But every university, if it is to be great, must have a heritage to share with those who come to her.

The University, since 1888, has stood in the Catholic tradition, bringing to its students the educational heritage of the oldest continuous institution in the western world. From the 12th century ecclesiastical foundation of the universities of Paris and Oxford to the more recent establishment of the Catholic University of America (1887), this tradition continues in the University of Scranton.

Beyond this, the University stands in the Jesuit tradition, one of the youngest of 60 universities administered by the Jesuits throughout the world. From the establishment of the Gregorian University in Rome (1551), to the founding of Georgetown College in the Federal City at the time of the adoption of the Constitution (1789), to the coming of the Jesuits to the University of Scranton in 1942, this tradition has signified academic excellence and Christian humanism.

William J. Byron, S.J., Ph.D., President of the University and Professor of Economics

GOALS

1. The University of Scranton is a **Catholic, Jesuit** college in the **liberal** arts tradition, serving primarily undergraduate men and women. Its emphasis on undergraduate education does not preclude the establishment and encouragement of appropriate graduate programs so long as those programs are extensions of and congenial to the basic undergraduate commitment.

2. Historically, this Catholic University has served the population of the city of Scranton and its surrounding area. While retaining its basic commitment to the area in which it has roots, the University now includes in its declared purpose the intention of building and retaining, in addition to the flow of commuter students from the metropolitan area, an on-campus resident population of students from areas well beyond the city of Scranton, including areas well beyond the borders of the United States. Moreover the University does not intend to serve Roman Catholics in any exclusionary sense, but rather to provide Catholic education in a properly ecumenical sense for students from a variety of religious backgrounds and different value orientations.

3. **The University of Scranton is Catholic.** This means, first of all, that the University is committed to the person and gospel of Jesus Christ as the source of values and attitudes that should characterize the campus culture. The University is church-related and faith-committed. The Church to which it relates understands itself as a "people of God." The faith this University serves is in every instance a gift from God involving the act by which the human person entrusts himself or herself to the one God who calls each in a unique way and reveals Himself to all in an accessible way. Theology, as an intellectual effort to understand the data of divine revelation, is an academic discipline of first rank in a Catholic university. Theology here is done primarily in the Roman Catholic tradition. The University of Scranton stands in that tradition, communicates it in a systematic way, but explores as well other traditions for their intrinsic merit and for the contributions they can make to a better understanding of the Catholic tradition.

4. **The University of Scranton is Jesuit.** This means that the life of the University is inspirited with the vision contained in the Book of the Spiritual Exercises of St. Ignatius of Loyola, the founder (in 1540) of the Jesuit Order. This spirit is brought to the University not only by the Jesuits who live and work there, but also by their lay colleagues and students who may make their own this same vision through the personal experience of the Spiritual Exercises. Translated into an educational context, this vision manifests itself in a respect for the individual student as a unique person, an emphasis on service, on open communication, on freedom of choice, on openness to change, on freedom from inordinate attachments, on commitment to the value system contained in the Gospel of Christ. As Jesuit education grew, these characteristics manifested themselves in more measurable educational terms like clarity of thought, care for fundamentals, excellence in written and oral expression, reflection on personal experience, respect for the best in past human experience.

Mother Teresa of Calcutta, India, receiving the University of Scranton's La Storta Medal for Human Service.

To be Jesuit today, the University community must include Jesuits who make their own the elements of Jesuit identity articulated by the delegates to the 32nd General Congregation of the Society of Jesus, the Order's highest legislative body, which met in Rome for three months ending in early 1975. The Congregation's Decree on "Jesuits Today" reads in part: ". . .today the Jesuit is a man whose mission is to dedicate himself entirely to the service of faith and the promotion of justice, in a communion of life and work and sacrifice with the companions who have rallied round the same standard of the Cross and in fidelity to the Vicar of Christ, for the building up of a world at once more human and more divine" (No. 31). But Jesuit identity is served and preserved not by Jesuits alone. Jesuit-lay colleagueship broadens the basis of respect in this University Community for faith as a value and justice as a goal. Upon these characteristics rests the University's Jesuit identity.

5. **The University of Scranton is committed to liberal arts education.** This commitment is held in creative tension with the University's commitment to serve the practical or career-oriented expectations of its students.

It is our goal to blend with the liberal arts an appreciation of basic science. Similarly, it is our goal to provide a foundation in the humanities to all of our programs of scientific specialization.

Career-oriented course concentrations will, at this University, always be accompanied over the full course of undergraduate study by a general education curriculum which, in the judgment of the faculty, gives every student, regardless of major, an adequate exposure to the disciplines of the liberal arts. In line with the emphasis the University attaches to the liberal arts, attractive majors in these disciplines will be provided and special care will be had to foster excellence of teaching and library support for the liberal arts.

6. **The University of Scranton is committed to academic excellence.** The pursuit of this goal touches all elements of the life of the University, as outlined below; but first the University must express its understanding of the idea of excellence. Excellence is, in every instance, a relative term. To excel, is to move or stand apart from a well-defined starting point. Our pursuit of academic excellence begins with an understanding of where we are and what we propose to do.

a. **Students.** We begin with a respect for the varying capacity of the students, a characteristic Ignatius of Loyola insisted upon for his schools. The University will include in its student body no one who is incapable of serious academic work. But given that initial norm, the University wants heterogeneity in its student body with respect to race, sex, religion, socio-economic background, and academic potential. Moreover, the University intends, in the spirit of Christ, to do all it can to serve the poor. Excellence in the student body is measured in terms of development of academic potential, respecting in every case the unique characteristics and varying capacity of students.

b. **Faculty.** We begin with the acknowledgment that the quality of the University depends essentially on the quality of the faculty. We also propose to be primarily a teaching University, rather than a research center. The University takes the position that good teaching is enhanced by serious research and will not last without it. Hence, excellence in the University's faculty is measured in terms of continued advancement in the quality, effectiveness and vitality of classroom performance, as well as the continued application of faculty energy to research which, ordinarily, will lead to occasional publication for a scholarly or generally well-educated audience beyond the University community. We regard teaching and research as complementary, not in opposition or competition with each other.

c. **Administration.** The starting point from which administrators move to excel is manifold. It presupposes credentials appropriate for leadership and management in an educational environment, experience with the special problems of that environment, and knowledge of, as well as being known in, the academic community beyond the University. Excellence is then measured along lines of improved knowledge of the University as an institution and a community, service to the constituencies of the University, availability and responsiveness to the needs of the University community, management of financial and academic affairs, effectiveness of planning, decision-making and communication of plans and decisions to the University community, and impact in the realm of ideas and influence in the metropolitan area or beyond.

7. **The University of Scranton is committed to personalized education.** The student is at the center of everything the University does. Inspired by a Christian personalism, our governance, instruction, and all related services, especially counseling services and academic advising, respect the uniqueness of the individual. The individual is viewed, however, as a member of a campus community and of a larger human community. The educational approach of Christian personalism regards the individual as a person-in-community. Education at the Uni-

versity of Scranton aims to sensitize the student to his or her societal obligations as well as to his or her unique personal value, thus avoiding, it is to be hoped, a rugged individualism or a mindless collectivism in the collegiate years and in later life. With total respect for an individual's freedom of choice and conscience, the University provides opportunities for worship and spiritual growth. Provision is also made for social development in a community environment informed by Catholic principles. The social and intellectual dimensions of the campus community are value oriented, designed to foster in every student principled judgments and actions that are free, responsible and humanly valid.

8. **The University of Scranton is committed,** as one of the dominant institutions in the civic community of Scranton, **to off-campus community service.** The primary service rendered by the University to the area is the education of future leaders for the area's professional, political, religious, cultural and business communities. Without interrupting or hindering this work, the University recognizes its capability and responsibility of rendering technical and cultural assistance on occasion to members of the communities enumerated immediately above. It also recognizes its responsibility to provide students, as students, with experience of the dominant social and economic problems of this region. This is in order to assist them in systematic analysis of the problems of contemporary life and motivate them to contribute in some way after graduation to the solution of these human problems.

The University, moreover, will encourage faculty research directed toward an enlargement of the region's understanding of its own problems.

Finally, the University will encourage and support members of its campus community to exercise their right to speak out as conscientious citizens against injustices which are perceived to be causing or exacerbating social problems in the civic community.

9. **The University acknowledges that being in the Jesuit tradition means being experimental and innovative.** The Jesuit belongs on the growing edge of Catholic life, interpreting the Church to the world and the world to the Church. It is in the Jesuit style to do, in education or any other work, what others cannot or choose not to do. The University therefore commits itself to the fostering of these Jesuit characteristics, from its well-established institutional base. The educational apostolate under Jesuit auspices is instrumental; it is not an end in itself. The apostolate is a means for promoting the greater glory of God through the life of the minds of human persons. Accordingly, the Jesuit sees as the object of the educational task not only the intellect, but the will also, and indeed the total human person. The University of Scranton views its educational task in the same way.

10. **This Statement of Goals is intended to give direction to all that the University does.** Progress toward these goals will be measured first by the ability of each academic department and administrative unit to choose, and announce the choice of, specific objectives pertaining to each division of this Goals Statement. Second, progress toward our goals will be measured by the actual achievement of the stated objectives. The objectives, clearly stated, quantified and specified within a time frame, will be the means to the ends spelled out in this Statement.

THE CAMPUS

Since 1956, a development program has added 16 modern buildings including ten residence halls. Principal among these campus structures are:

ALUMNI MEMORIAL LIBRARY—opened in 1960, a striking presentation of advanced, functional architectural planning, this bright, air-conditioned building contains more than 160,000 volumes and subscription service to 950 periodicals. Microfilm, microcard and microfiche collections, a science reference room, music room and the offices of the University's semi-monthly national book review, *Best Sellers,* are located here. Additionally, the Cooperative Program with Marywood College, less than two miles away, gives students full privileges to another 135,000 volumes, 1,100 periodicals, as well as an extensive collection of audiovisual materials. Through the library's membership in the interlibrary loan communications network of the Northeastern Pennsylvania Bibliographic Center, students have access to more than 400,000 titles in the affiliated twelve libraries. (See photo page 16).

JOHN J. LONG CENTER—completed in 1968, and named for the former Jesuit President of the University, this three-level, multi-purpose structure has enabled the University to broaden its program of physical education. It includes a 22,820 square foot main floor area used for basketball, or convocations with a seating capacity of 4,400. It provides specialized facilities for such activities as wrestling, weight lifting, handball, tennis, and golf, as well as a physical therapy room and sauna. (See photo next page).

LOYOLA HALL OF SCIENCE—provides the highly specialized equipment necessary for the study of engineering, physics, chemistry, and biology. The University's Communication Center has facilities on the top floor of the building.

SAINT THOMAS HALL—located in the center of campus, this building is named for St. Thomas Aquinas and provides a symbolic historic link between the modern University of Scranton and its predecessor, St. Thomas College. It contains many non-science classrooms, language and communication laboratories, the Computer Center, the University Chapel of St. Ignatius Loyola, offices for the Registrar, Treasurer, Dean of the College, Admissions, Financial Aid, Academic Vice President, Office of Career Services, Counseling Center, Veterans Affairs, Graduate School, Hanley College, and Director of Continuing Education.

O'HARA HALL—the recently acquired O'Hara Hall houses classrooms, accounting laboratories, and faculty offices for the College of Business as well as the classrooms, laboratories, and faculty offices of the Departments of Psychology, Military Science, and Human Resources. It is located two blocks north of the main campus and is named in honor of Frank J. O'Hara who has served the University for over a half-century.

STUDENT CENTER—facilities include faculty and student lounges, cafeteria and snack bar, rifle range, game room, and a 400-seat auditorium used for cultural events and dramatic productions. The offices of the Vice-President for Student Affairs, Dean of Students, Campus Ministry, University Chaplain, Student Government, and most student activities are found here.

RESIDENCE HALLS—designed to function according to small-group living principles, ten residence halls for out-of-town students are provided on the campus. Constructed between 1958 and 1965, they are centered about terraced quadrangles. A Jesuit counsellor lives in most halls and there is a resident assistant on each floor.

To meet the increasing enrollment of out-of-town students, the University has also recently acquired a series of houses and apartment buildings in the vicinity of campus and converted these to various of student apartment-complexes. Some of these are organized about academic interests and most feature optional kitchen arrangements. Finally, students in the upper classes are permitted to live off campus in non-university owned apartments.

The standard plan for resident students includes living quarters, three meals on each class day, and brunch and dinner on weekends and mid-week holidays. The plan includes nursing service for emergency and short-term care in the infirmary. Inquiries about residence halls should be made to the Dean of Students. Further information is given in that section of the bulletin which deals with expenses.

THE GRADUATE SCHOOL

A resource at hand to undergraduates is the University's Graduate School which offers the Master of Business Administration degree as well as Master of Arts or Master of Science degrees in Art Education, Biochemistry, Chemistry, Counselor Education, Elementary and Secondary Education and Educational Administration, English, General Science, History, Physics, Reading, Rehabilitation Counseling and Vocational Adjustment.

A number of these departments offer accelerated programs which enable students to graduate with both the Bachelor and Master's degrees in five years or less. In addition, undergraduates with strong academic records and the permission of the appropriate deans are allowed to take courses in the Graduate School as part of their undergraduate program.

HANLEY COLLEGE

The Dexter L. Hanley College, named in honor of the late Jesuit Labor Lawyer and former President of the University, provides undergraduate education leading to both Associate and Bachelor's degrees for adults and others desiring to take their courses on either a predominantly part-time basis or during the evening.

Jimmy Carter and Ted Kennedy visiting the University

A FACULTY WHICH TEACHES

If the University brings to the student a tradition and distinct values, its most important resource is its faculty. Over 200 faculty and administrators participate in the educational enterprise. They hold degrees from 135 different universities in 30 foreign countries on five continents. Cambridge and the University of London in England; Louvain and the Gregorian on the Continent; the University of Calcutta in India, the Meiji University in Japan, the University of Cuzco in Peru; Berkeley, Harvard, Yale, MIT, Notre Dame and Georgetown in America—all are represented among the faculty.

By its nature and function, a university faculty constitutes the most cosmopolitan element in a community. Hindu and Muslim, Christian and Jew, ministers and rabbis, scholars, research scientists, and above all, teachers, are found on the University's faculty.

The Jesuit tradition is carried on at the University not only by the 30 Jesuits engaged in teaching or administration, but by the fact that over two-thirds of the faculty hold at least one degree from a Jesuit college.

Many of the pictures which follow and the Faculty Directory at the conclusion of this Bulletin present more detailed information about the faculty.

Charles Thoman, S.J., Ph.D., University of Massachusetts,
Professor of Chemistry and Chairman of the University Senate.

Thomas Scott, S.J., Ph.D. University of Wisconsin, specialist in computer uses for study of history.

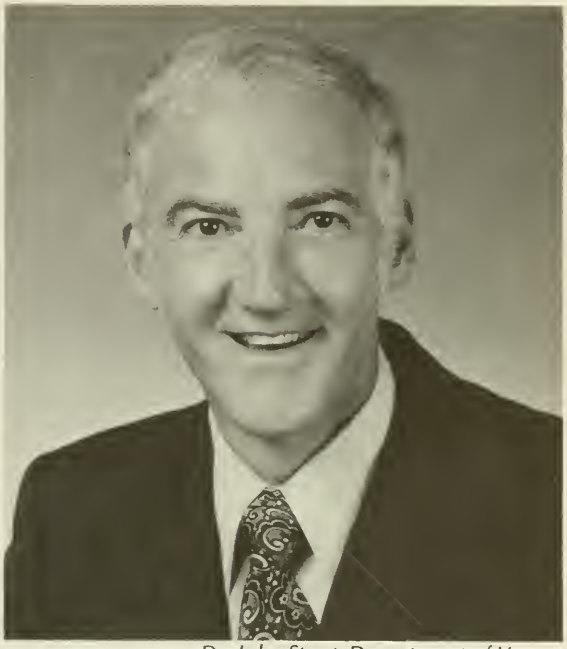
John Quinn, S.J., Ph.D. University of London, specialist in cinema studies

Francis MacEntee, S.J., Ph.D. Catholic University of America, biological researcher in recycling exhausted soils

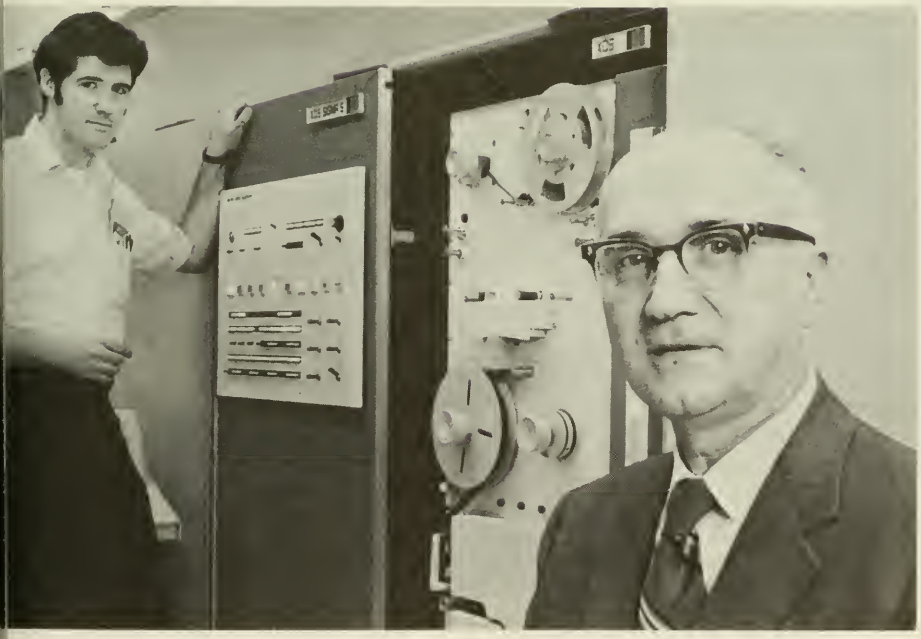
Professors Ellen and Steve Casey, Departments of English and Theology; Director of the Honors Program and Chairman of the Theology Dept., respectively

Rabbi Simon Shoop, lecturer in Jewish Studies; M.A. Yeshiva University; Ph.D. University of Pittsburgh; D.D. Jewish Theological Seminary of America

Professor Anne Jones, Instructor in American and Visual Arts



Dr. John Stout, Department of Human Resources



Professors John Beidler, Department of Mathematics, and Andrew Plonsky, Director of Computer Science

THE SCRANTON ENVIRONMENT

The fourth largest city in the state, Scranton with a population of over 100,000, is the principal city of Northeastern Pennsylvania. As a focal point of the interstate highway system, it is less than three hours by car from New York City and Philadelphia. The Pocono Mountains and Susquehanna River resorts with magnificent streams, lakes, and numerous ski slopes are only an hour away.

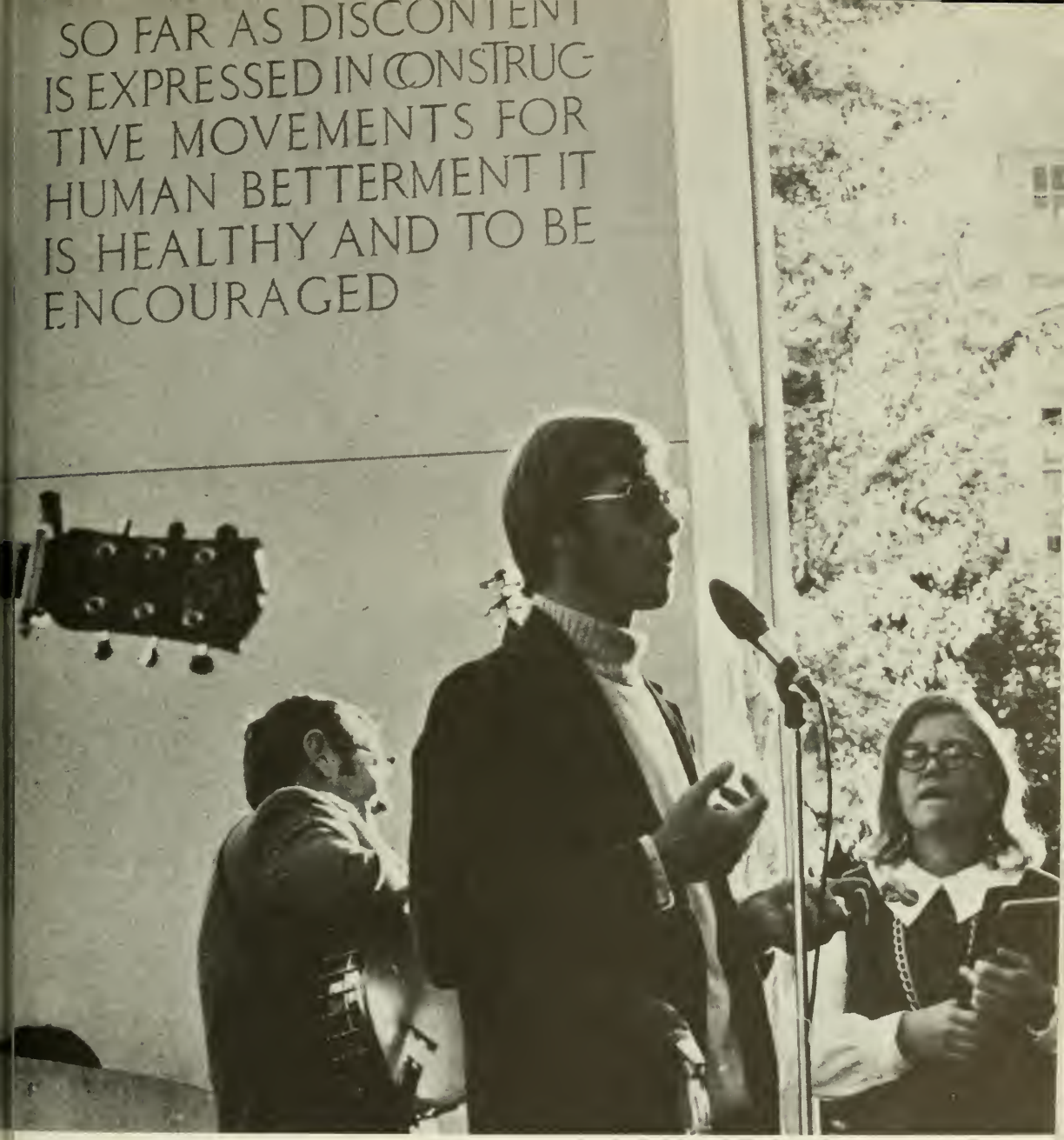
The city itself is a unique laboratory of the American urban tradition. Her industrial history dates from 1840 when the anthracite hot blast furnace was utilized for the first time in the iron industry. The manufacture of iron and steel gradually gave way to the more important anthracite mining industry, the city and entire Lackawanna Valley being underlaid with one of the richest hard coal deposits in the world. The mines served to attract immigrants from a multitude of nations, giving Scranton even today, sociologically and ethnically, one of the most diverse populations in America.

As the anthracite industry collapsed towards the end of World War II, Scranton was faced with challenges only later to be faced by many other American cities: almost total conversion to a new economic base of manufacturing, reclamation of the area from the environmental pollution of the anthracite era, and amid all this change, the preservation of its own identity.

The recent restoration of the century-old Lackawanna Iron and Steel Co. furnaces just south of the University, the establishment of a National Coal and Recreation Park, the continuing development of the local Everhart museum, part of whose collection of the 19th century American folk art represented the United States at Expo 70 in Japan and the Munich Olympics, are indicative of the city's uniqueness.

As the pages of the Bulletin illustrate, historically the University has been an integral part of the Scranton environment. The modernistic campus, built almost entirely in the last decade, overlooks the downtown area of the city. The historic nucleus of the campus is the Victorian mansion built in 1870 by Joseph Scranton, great-grandfather of William Scranton, former Governor of Pennsylvania and U.S. Ambassador to the United Nations. The mansion and estate grounds were given to the University by the Scranton family. Mrs. William Scranton recently concluded a term on the University's Board of Trustees.

As the city has served the University, so the University has served the city. Fully half of the area's doctors, dentists, lawyers, accountants, and male high school teachers are graduates of the University. Much of the business community responsible for the city's economic renewal received its training either at the bachelor's or master's level from the University. Members of the University faculty serve the region through research on the genetic effects of environmental pollution and soil reclamation of the culm waste deposits of the mines. In the advance from the technology of the anthracite hot blast furnace to the Sigma 5 computer, the University and the city have been partners.



WHAT THE STUDENT BRINGS TO THE UNIVERSITY

WHAT THE STUDENT BRINGS TO THE UNIVERSITY

If the University changes, it is primarily the succeeding student generations which change it. A recent issue of the *Windhover,* the college yearbook, was dedicated by its editors to the "Committed Idealist," to those students who bring to the University community their active participation in its life and whose diversity and academic achievements add to the prestige of their alma mater.

DIVERSITY

As the faculty come from around the world, so do our students. Twenty-four states and 17 foreign countries are represented in the University's student body. In turn, through the Year Abroad program, University of Scranton students matriculate at such foreign universities as Louvain, Madrid, Stockholm, Salzburg, Heidelberg, Strasbourg, the Sorbonne, and University College, Dublin. This interchange of students contributes to the diversity and intellectual life of the University.

At the time when the spirit of intolerance grips many American campuses, when only one political opinion may be expressed as well as prevail, it is a source of pride to the University of Scranton that a diversity of political and social views flourishes among our students. In the political turmoil of recent years that shut down many universities and brought violence to others, it was the determination of her students and faculty that the doors of this University should remain open, its classes held, that all opinions should be heard and orderly processes followed in the resolution of our problems.

PARTICIPATION

Much of the work in a university community is accomplished through student input. Much of the scientific research at the University is done by undergraduate students in the laboratories and in the field. The University newspaper and yearbook are edited and managed by students. Frequently students publish reviews in *Best Sellers* and, with faculty assistance, in other national scholarly journals. Students work in the public relations and admissions offices, computer center, as resident assistants in the dormitories, as research assistants and interns for deans and registrars.

Similarly, they participate in the University's decision making. Five students are elected by the student body to serve on the University Senate. Others serve with departmental chairmen and faculty on the Conference which recommends to the Dean changes in the academic program of the college. They form a majority on the Student Affairs Council which prepares legislation for the president's review. Students also serve with other members of the University community on the various Search Committees which recommend candidates for the several administrative posts.

Royals Historical Society at Cloisters in New York

Miss Linda D'Andrea, '77, student at Thomas Jefferson University Medical School and Trustee of the University of Scranton

Pair of NCAA Division III champs

ACHIEVEMENT

The Jesuit educational tradition has produced men as diverse as Charles De Gaulle, James Joyce, Teilhard de Chardin, Paul VI, Doctor Tom Dooley, Prime Minister Trudeau of Canada, film maker Alfred Hitchcock, coach Vince Lombardi—to name but a few of over 2,000,000 alumni. Fifteen thousand of these alumni have graduated from the University of Scranton. These, too, have achieved:

Patrick Cardinal O'Boyle ('16, classics), Archbishop of Washington; Dr. Clarence Walton ('37, history), first lay president of the Catholic University of America; Dr. Glynn Lunney ('55; pre-engineering), Chief of the Flight Director's Office for the National Aeronautics and Space Administration, lead flight director for the historic moon flights of Apollo 11 through 15; Jason Miller ('61; English), winner of the 1973 Pulitzer Prize in Drama for *That Championship Season* and "Oscar" nominee for his role in *The Exorcist.*

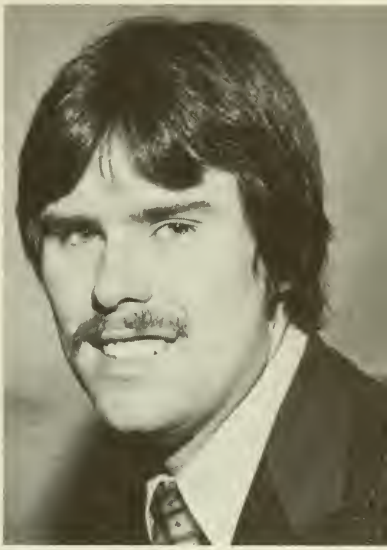
Achievement is recognized too in the number of prestigious national fellowships awarded to graduates of the College in recent years: in 1971-72, Mr. Gerald Mulderig, a double major in English and German, was appointed to a Fulbright Fellowship for graduate studies at the University of Cologne in the Federal Republic of Germany; that same year, Mr. John Rock, a German major, was appointed as a Fulbright Fellow to the University of Mainz. In 1972-73, Gerard Dougher, a French major in the College, was appointed as a Fulbright Fellow to France. In 1973-74, three graduates of the College were appointed to Fulbrights: Kevin Wilson, a double major in history and English was awarded a Fulbright Fellowship to Rumania; Basil Malish, a Spanish major, was appointed Fulbright

Michael J. Eagen, Sr., '27
Chief Justice of Pennsylvania

Clarence C. Walton, '37
President, Catholic University of America

Rock, '72
right Fellow to
f Mainz

George McCool, '74
Fulbright and Rotary Fellowships to France
John Ausura, '75
Fulbright and Rotary Fellowships to
U. of Bonn



Tom Bonhage, '77
Fulbright to U. of Kiel

Kevin Wilson, '74
Fulbright to Rumania

e Hosie, '76
right to Germany

Basil Malish, '72
Fulbright to Portugal

Fellow to Portugal; and George McCool, a French major was awarded both Fulbright and Rotary Fellowships to France. In 1974-75, Mr. John Ausura, a German major was awarded both Fulbright and Rotary International Fellowships for graduate study at the University of Bonn. In 1976-77, Miss Grace Hosie, a German major, was awarded a Fulbright to the Friedrich-Wilhelm University in Bonn, Germany, the first coed of the College to receive a national fellowship. In 1977-78, Mr. Thomas Bonhage, a double major in history and German, was appointed as a Fulbright Fellow to the University of Kiel in the Federal Republic of Germany, becoming the University's tenth Fulbright Fellow.

The record of achievement continues with the most recent classes whose graduates went on to Georgetown, Harvard, Rutgers, Cornell, U. of Pennsylvania Law Schools; MIT, Rochester, William and Mary, Boston College, Notre Dame, Louvain, Dartmouth, Carnegie-Mellon Graduate Schools; and Columbia, Temple, Hershey, Thomas Jefferson, U. of Pennsylvania, and Georgetown Medical Schools, among other institutions. The 2,400 students currently enrolled in the College of Arts and Sciences are a distinguished part of the half-million students now enrolled in Jesuit educational institutions around the world.

Dr. William J. Parente, Dean of the College of Arts & Sciences, Professor of Political Science

THE ACADEMIC PROGRAM

ACADEMIC PROGRAM

DEGREE PROGRAMS

The College of Arts and Sciences offers the following degree programs for the undergraduate student:

BACHELOR OF ARTS
- Classical Languages
- Communications
- English
- History
- Modern Languages
- Philosophy
- Theology and Religious Studies

BACHELOR OF SCIENCE
- Accounting
- Biochemistry
- Biology
- Biophysics
- Business Administration
- Chemistry
- Chemistry-Business
- Computer Science
- Economics
- Education
- Electronics
- Food Science and Nutritional Chemistry
- Human Services
- Law Enforcement
- Mathematics
- Medical Technology
- Physics
- Political Science
- Public Administration and Public Affairs
- Psychology
- Sociology

COOPERATIVE PROGRAM WITH MARYWOOD COLLEGE

The University's Cooperative Program with Marywood College—less than two miles away and the largest Catholic college for women in America—makes available to University students additional individual courses in the following areas:

- Art
- Business Education
- Elementary Education
- Home Economics
- Librarianship
- Music
- Radio and Television
- Special Education of the Mentally Retarded
- Speech Arts and Therapy
- Theatre

THE SCRANTON PLAN

The product of a two-year study by a faculty-student-administration committee, the new Scranton Plan seeks traditional Jesuit university educational objectives in the era of the knowledge explosion. In departing from a core curriculum of specifically required subjects, it acknowledges that there are today many more requirements for a liberally educated person than was formerly the case: disciplines, especially in the natural and social sciences, not known a century ago; foreign cultures thought insignificant only fifty years ago.

The New Curriculum, in seeking to equip undergraduates with the ability to effectively communicate their knowledge, takes note that there are today many more ways to communicate than in the past. Computer science and other quantitative languages, applied fine arts as aesthetic languages, writing and oral com-

munication laboratories may develop the ability to communicate with others and carry on the University's traditional emphasis on rhetoric as cogently as the study of Latin and Greek in the past, or even the study of modern foreign languages in today's world of intensified international relations. Different students will have different communication interests and it is a virtue of the new curriculum that its flexibility can accommodate and utilize that interest.

Finally, the Scranton Plan takes note that contemporary students have criticized the absence of the study of values on American university campuses, the failure of the universities to deal with philosophies of life which provide the means to evaluate the norms of national and personal actions. The new Scranton curriculum provides a significant place for the study of philosophy, the theological tradition of the student, and comparative religions. This too continues a traditional emphasis in the University's educational pattern but allows the student flexibility in choosing to meet third and fourth year general education requirements, either through theology or philosophy, in opening up more opportunities for the study of human values through related courses in psychology, sociology, environmental sciences, etc., and in making it more feasible to carry a double major in theology or philosophy along with the student's regular major.

CURRICULAR OUTLINE

Major Field of Concentration ..... 36 credits
Cognates Related to Major ..... 24 credits
General Education ..... 67 credits

Major: 36 credits in the major field of concentration is the normal amount. Some departments require less, the minimum being 30 hours with the unallocated credits going into the other curricular areas. Several departments, especially in the physical science area, require more than 36 hours, the additional credits coming from the cognate area and/or as overloads beyond the normal 127 credits needed for graduation. The specific departmental curricular models on subsequent pages of the Bulletin should be consulted. Students desiring to shape an **interdisciplinary major** should consult the Dean of the College on their program.

Cognate: These are courses external to the major field of concentration, but which round out the student's competence in his major through the study of related disciplines and subject matter, or the acquisition of skills useful to his specific vocational goals. Normally the cognate will consist of 24 credit hours, some of which may be specified by the department and others chosen by the student according to his particular interests or objectives.

General Education: Shunning a merely technical or pre-professional education, the majority (67) of the student's 127 credits toward the degree are devoted to a broad liberal education according to the following pattern.

A. **Physical Education**—Four one-credit courses in the freshman and sophomore years ..... 4 credits

B. **Distribution of remaining credits into broad areas of knowledge as indicated in the table** ..... 63 credits

In some instances, departmental recommendations are made with respect to the general education courses; departmental curricular models should be consulted. In fulfilling the distribution requirement, a student ought ordinarily to complete at least five two-course sequences to provide depth as well as breadth in his general education.

C. **Interdisciplinary Courses**—These one semester courses are taught by professors from two different departments. Their purpose is to demonstrate the inter-relatedness of various fields of knowledge and the necessity to synthesize.

D. **Communication Skills**—Unlike many college curricula, the new Scranton curriculum does not require specific courses in English grammar. Rather, because of its recognition that writing and speaking effectively are skills necessary for success in college and in one's later professional life, the College of Arts and Sciences requires that every student must demonstrate basic competencies in written and oral communication before his junior year. Each of these competencies may be demonstrated by the student in one of the following ways:

1. Competence indicated by the high school data submitted for admission: academic achievement or extracurricular success in these areas.
2. An examination supervised by Communication Center faculty.
3. Certification by a professor that the student's class papers or oral presentations clearly demonstrate each competence.
4. Successful completion (a grade of C or higher) of courses set up to facilitate mastery of these skills: English 2 for oral communication; English 7 for writing skills.

E. **Non-Classroom Activities**—With the approval of the Dean of the College and the appropriate department, the student is encouraged to petition beforehand that certain non-classroom activities such as travel abroad, internships, participation in artistic productions, sustained activity in political, social, or religious organizations, etc. be supervised, evaluated, and accepted for academic credit—normally in the Free Area of the General Education distribution.

DOUBLE MAJOR PROGRAM

Students at the end of the first semester of sophomore year or thereafter may elect to pursue a second field of concentration in addition to their first major. The permission of the Dean of the College and the agreement of two departmental chairmen should be obtained in writing at this time and placed in the student's file. The student is responsible for all major and required cognate courses. The 67 credits in the General Education area need not, of course, be repeated. The Registrar's office will add the notation of the second major to the student's transcript in the first month of the student's senior year by which time he should have registered for all the courses required in the double major program. Twenty-two students in the class of '77 graduated with double majors. History, mathematics, and business administration were most favored (four students each), with computer science, psychology, foreign languages, sociology, theology, political science, psychology, philosophy next (three students in each), and biology, physics, accounting, medical technology, and communications also represented.

DISTRIBUTION TABLE

General Education Areas	MAJOR FIELDS OF CONCENTRATION				
	Nat Sci. Math Acctg. Psych. Comp. Sci.	*Human Services Sociology† Bus. Adm. Pol. Sci. Economics Law Enforcement*	*English History Classics Mod. Lang.*	*Phil. Theology*	*Communications*
	a	*b*	c	*d*	e
I. *Natural Science & Quantitative Studies* (Natural Sciences, Math., Engineering, Adv. Experimental Psych., Adv. Computer Sci., Acctg., Statistics)	—	9	9	9	9
II. *Social and Behavioral Sciences* (Sociology, Business, Economics, Pol. Sci., Psychology 23, 25, 26, Mil. Sci. 101, Educ. 21, 22)	12	—	12	12	6
III. *Communications* (Speech, Writing, Elementary and Intermediate Languages, Applied Fine Arts, CMPS 20, 21, 25, See also P. 110)	9	9	9	9	—
IV. *Humanities* (History, Fine Arts—Appreciation, English/Foreign Lit., Advanced Languages)	18	18	6	18	18
V. *Philosophy and Theology* Philosophy Theo./Religious Studies	6 (6)* 6	6 (6)* 6	6 (6)* 6	6 or (6)* 6	6 (6)* 6
Free Area	6	9	9	9	12
			CREDITS		

†Sociology allows 12 credits in Free Area.

*Indicates these credits may be taken in either Philosophy or Religious Studies.

SPECIAL PROGRAMS

THREE-YEAR BACHELOR'S DEGREE PROGRAM

The University of Scranton's New Curriculum and new calendar allow qualified students to attain their bachelor's degree within three years—thus considerably reducing the overall cost of their undergraduate education and allowing the student to enter the market place or begin graduate and professional studies a year earlier. While Advanced Placement or College Level Examination Program credits (see Index) are very useful for this, a student who does not bring these from high school may still complete the degree program in most majors within three years through the use of January Intersession courses and/or Summer School sessions. This presumes that at a minimum, normal academic progress is being made. Typically two Summer Schools (12 credits each) and two or three January Intersessions will suffice. Especially qualified students may be allowed overloads from the Dean of the College to further reduce this—as will Advanced Placement credits. The Dean should be contacted as early as possible in a student's career in order to facilitate the needed scheduling. Entering freshman students may want to use the Summer School immediately following their high school graduation to further this three-year program; the Director of Admissions should be consulted with respect to this. Details on the special Scranton Prep-University Seven Year (4-3) high school-college degree program are available from the Dean of Studies at Scranton Prep.

FIVE-YEAR BACHELOR-MASTER'S DEGREE PROGRAM

This program enables University undergraduates to complete both the bachelor's and master's degree program within five years in the fields of English, Business, Chemistry, Biochemistry, Human Services, and Physics. Students elect to enter the program after sophomore year. Ordinarily two summers of study or equivalent January intersessions are needed.

FOUR-YEAR BACHELOR-MASTER'S DEGREE PROGRAM

Qualified undergraduates in the departments of history and chemistry have the option of pursuing a four-year program leading to simultaneous conferral of bachelor and master's degrees in history, chemistry or bio-chemistry. Summer work and the use of 12-13 graduate credits in place of undergraduate courses are involved. The departmental chairman should be consulted for details.

HONORS PROGRAM

This program provides selected students whose QPI is at least 3.3 with the opportunity for directed independent work and a challenge to their ability to synthesize. Applicants are admitted to candidacy in their third semester of college. Those admitted to the program take inter-disciplinary seminars as well as tutorials both in and outside their major field. All honors degree students must complete and orally defend a thesis of publishable quality. For details consult the Director of the Honors Program, Dr. Ellen M. Casey.

SPECIAL JESUIT LIBERAL ARTS CURRICULUM

This specification of the credits available to all students in the College's General Education program is intended to follow more closely the traditional Jesuit liberal arts core curriculum while still adapting itself to contemporary intellectual and social developments. This distribution pattern emphasizes:

1. The transmission of the Western classical heritage and the Christian humanist culture to the contemporary student through literature, history, philosophy and theology.
2. An ability to undertake logical, systematic, and critical reflection on a given intellectual problem and to apply one's conclusions to the contemporary situation.
3. An understanding of and sensitivity towards the contemporary problems of equality and individual freedom, of economic, social and political justice.
4. An outstanding ability to communicate or what Jesuits historically have referred to as "eloquentia perfecta." This aims not merely at competence but mastery of writing and speaking skills with the goal of persuasion and full communication of one's ideas. Students are strongly urged as part of this program to join the College's drama group, the debate squad and to write for the *Aquinas,* the college newspaper, *Esprit,* the literary quarterly, or the book review journal, *Best Sellers.*

Finally, it is presumed that the students in this program will apply for admission into the College's Honor Program in Junior and Senior year. Questions on the Jesuit Liberal Arts Curriculum should be addressed to its Director, Rev. Edward Gannon, S.J.

Dept. & No.	Fall Semester	Spring Semester	Credits	
		FRESHMAN		
MAJOR	MAJOR	MAJOR	4/3	4/3
COGNATE	COGNATE	COGNATE	4½/3	4½/3
Psych. 23-Soc. 22	Introduction to Psychology	Social Problems	3	3
Phil. 20-108	Introduction to Philosophy	Metaphysics	3	3
Econ. 11-T/RS 6	Inquiry into Economics I	Belief and Unbelief	3	3
Phys. Educ. 1-2	Basic Physical Education	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	MAJOR	MAJOR	4½/3	4½/3
COGNATE	COGNATE	COGNATE	4/3	4/3
COGNATE	COGNATE	COGNATE	4/3	4/3
Engl. 113-114	Logical/Rhetorical Analysis	Argumentation and Debate	3	3
Phil. 104-Hist. 102	Epistemology	Ancient History II	3	3
Phys. Educ. 23-24	Advanced Physical Educ.	Advanced Physical Educ.	1	1
			16	16
		JUNIOR		
MAJOR	MAJOR	MAJOR	4½/3	4½/3
MAJOR/COGNATE	MAJOR/COGNATE	MAJOR/COGNATE	4/3	4/3
COGNATE	COGNATE	COGNATE	3	3
T/RS 158-Phil 159	Perspectives I	Perspectives II	3	3
Hum. 151-152	Masterworks I	Masterworks II	3	3
Phil. 110-122	Ethics	Modern Philosophy II	3	3
			18	18
		SENIOR		
MAJOR	MAJOR	MAJOR	3	3
MAJOR	MAJOR	MAJOR	3	3
Hist. 3-4	European History 1500-1815	European History 1815-Present	3	3
Phil. and Engl. Elec.	Contemporary Phil. Elec.	English Literature Elective	3	3
T/RS 116-175	Gospels and Jesus	Norms for Christian Decision	3	3
			15	15

TOTAL: 140-130 credits,
Depending on major

YEAR ABROAD PROGRAM

Students with above average academic records are encouraged to participate in the University's Year Abroad Program. This ordinarily takes place in junior year but may also take place in sophomore or senior year. This year, 15 University students are attending the Dutch or French colleges of Louvain University in Belgium, the University of Madrid, Trinity College in Dublin, and other institutions. Interested students should contact the Dean of the College for detailed information.

ASSOCIATION OF JESUIT COLLEGES

A variant of the Year Abroad is the University's program in conjunction with the 28 Jesuit universities in America by which above-average students may spend a semester or full year at another Jesuit institution. These institutions are listed on Page 159. Consult the Dean of the College of Arts & Sciences for details on this program.

INTERNSHIP PROGRAMS

The University's committment to internships as an integral part of the educational process is strong and growing. In 1976-77, almost 250 students in the College of Arts & Sciences were engaged in internships carrying academic credit related to their major or vocational goals. 165 of these were seniors—one-third of the class— in ten different majors.

Medical Technology majors spent their senior year in four different hospitals in New Jersey and Pennsylvania.

Over a dozen Sociology majors worked in paid internships for health, hospital, psychiatric and social welfare agencies funded by the Scranton Mental Health/Mental Retardation Agency.

Human Service majors select educational, health, welfare, correctional rehabilitation, day care and recreational agencies for their internship settings. Fifty students participated in the undergraduate internship program last year.

Seniors majoring in Accounting are eligible to participate in a 13-week on-the-job internship with eight nationally recognized accounting firms. The internship takes place in December-March of senior year. Selection is made on the basis of QPI rating (minimum 3.0) and on interviews by company representatives. In the most recent year, students worked for such firms as Price Waterhouse, Haskins and Sells, Arthur Andersen, Peat, Marwick, Mitchell & Co., Touche, Ross & Co., Ernst & Ernst, Coopers, Lybrand & Co., in New York, Philadelphia, and other cities.

Communication and English majors served internships with academic credit in a number of newspaper and television station situations as well as in public relations, campus journalism, theatre directing and related positions.

Political Science and history majors—twenty during 1976-77—served pre-law internships in private law firms as well as in the Public Defender's Office, District Magistrate offices, District Attorney's office in Scranton, Philadelphia, and a number of other cities.

ACADEMIC REGULATIONS

DEGREE REQUIREMENTS

In order to earn a bachelor's degree from the College of Arts & Sciences, the student must complete all the courses prescribed in the curriculum table of the major (pages 47 to 118). No student will be eligible for graduation who has not removed all failures in required courses or who has not earned the necessary minimum 2.0 (C average) Quality Point Index.

Receipt of the degree is not automatic. Seniors expecting to graduate in the spring should make formal application for the degree by February 15.

GRADING SYSTEM

Grade reports are mailed to all students at the end of each semester and these become part of the official record of the student. Freshmen receive mid-semester grades to inform them of their progress. Upperclass students receive notice at the quarter if they are "deficient" and in danger of failing the course.

A	Excellent (outstanding and/or original work)
B, B+	Very Good (above average work)
C, C+	Satisfactory (average but not outstanding work)
D, D+	Unsatisfactory (passing but below average)
F	Failure (below minimum acceptable standards)
W	Withdrew officially during first or third quarter.
WP	Withdrew officially during second quarter with passing grade;
WF	Withdrew officially during second quarter with failing grade; computed in QPI as an F; equivalent to Failure.
I	Incomplete—must be removed within three weeks.
S	Satisfactory (Pass) } not figured in Quality Point Index
U	Unsatisfactory (Fail) } not figured in Quality Point Index
Audit	Course not taken for credit. (Change to Audit can be made only by passing students and before end of first or third quarter.)

UNSATISFACTORY: Equivalent to failure.

INCOMPLETE: If a course has not been completed because of illness or some other serious reason, an Incomplete may be given. To remove this grade the student must satisfy all course requirements within three weeks of the end of the exam period. Any course not completed by this time will result in a grade of F.

QUALITY POINT INDEX

A standard used in judging a student's performance is his quality point index (QPI) determined as follows:

Each semester hour of credit with a grade of A is valued at 4 quality points; B+ at 3.5 quality points; B at 3.0; C+ at 2.5; C at 2.0; D+ at 1.5; D at 1.0. An F or WF (withdrawn failing) yields no quality points. Thus, for example, a three-credit course with the grade A yields 12 quality points; a B yields 9; a C yields 6.

The Quality Point Index (or Quality Point Average) commonly abbreviated QPI (or QPA) is computed by dividing the total number of Quality Points earned by the total number of credits attempted. For example, 15 credit hours, all at C grade, would earn 30 Quality Points or a 2.0 QPI (30/15).

The total number of credit hours attempted include those courses with final grade F or WF as well as A, B, etc. Notice this Quality Point Index applies only to courses taken at the University of Scranton and is not affected by credits transferred from other colleges.

A Quality Point Index listing is made at the end of each semester. On the basis of his cumulative Point Index, a student's rank in class and his eligibility for honors at graduation are determined.

GRADUATION HONORS

To be eligible for graduation honors, a student must have completed a minimum of 90 credit hours of work at the University of Scranton.

Summa Cum Laude ..... 3.85 Quality Point Index in all subjects
Magna Cum Laude ..... 3.60 Quality Point Index in all subjects
Cum Laude ..... 3.30 Quality Point Index in all subjects

DEAN'S LIST

To be eligible for the Dean's List, the student must complete a full program (12 credits minimum; Pass-Fail courses ordinarily are not included in meeting this minimum). Those students whose QPI for the given semester ranks them in the top 20% of their class are named to the Dean's List for that semester. Names of those on the Dean's List are published each semester.

QUALITATIVE REQUIREMENTS

To graduate from the University of Scranton or to remain as a student in good standing, a Quality Point Index of 2.0 (C grade average) is required.

PROBATION AND DISMISSAL

One semester of probation is granted to students whose QPI falls below 2.0. Students who receive an F while on probation are subject to dismissal, as is any student who incurs 2 F's in one semester, or who has accumulated three F's which have not been successfully retaken. Probationary status ordinarily must be removed by attending summer school and January Intersession at the University of Scranton as a condition of retention. During this time the Quality Point Index must be raised over 2.0.

Students on Academic Probation are allowed to take no more than 14 credits during the fall or spring semesters with explicit approval of the Dean of the College. Students on probation are ineligible to participate in any co-curricular activities with the exception of departmental clubs with an academic orientation (i.e., French Club, Royals' Historical Society, etc.). Club Football, intercollegiate athletics, dramatic and theatrical productions, debate, and Student Government are prohibited.

CREDIT OVERLOADS

One credit or semester hour represents one lecture period of 50 minutes per week. Two or more hours of laboratory work are equivalent to one lecture hour.

Normal student credit loads are indicated in the departmental curricular models which follow below. Students with QPI between 2.4 and 3.0 are permitted three credits overload with the permission of their faculty advisor. Students with QPI above 3.0 are permitted up to six credits overload. All other requests should be directed to the Dean.

WITHDRAWAL FROM A COURSE

A student wishing to withdraw from a course should first discuss the matter with the instructor. There is always a financial loss to the student when he withdraws from a course and the matter should be carefully considered. If the student believes withdrawal necessary, he should obtain the form for this at the Registrar's Office, have it signed by the instructor and by the Dean of the College and then return the form to the Registrar's Office. Any tuition credit is based on the date on which the completed form is returned to the Registrar's Office. (See the Schedule of Refunds.) Failure to officially withdraw from a course may result in a failing grade for the course.

ABSENCE FROM CLASS

Freshmen are limited by University regulation to twice as many absences as credits are given for a particular course. Thus six cuts are allowed freshmen in most courses. Upperclassmen have unlimited absences unless the particular professor or the department promulgates in writing some other policy.

Students who exceed the cut policy are subject to a failing grade in the course. All absences, for whatever reasons, are covered by the above regulations.

WITHDRAWAL FROM THE COLLEGE

Students desiring to withdraw from the College should discuss the matter with the Dean of the College and, if so instructed, must submit a request for withdrawal from parents or guardian. The student should also discuss the question with his counselor. The form for withdrawal can be obtained in the Registrar's Office. It must be signed by all of the student's instructors, by the Counseling Center and by the Dean of the College. Similarly, the Dean of Students initials the form to indicate that the student has returned his ID card, and the library and Treasurer's Office initial the form to indicate that the student's financial accounts with the University are settled. Any tuition refund is based on the date on which the completed form is returned to the Registrar's Office.

GENERAL REGULATIONS

The University reserves the right to modify the requirements regarding admission; the right to cancel any course for which there is insufficient registration; change the arrangement of courses, the requirements for graduation, degrees, tuition, fees and other regulations affecting the student body. Such regulations shall govern both those presently enrolled and new students and shall be effective whenever determined by the University.

The College reserves the right to take appropriate disciplinary action in the case of any student who conducts himself contrary to the standards of the College. These standards are given clear expression in the Student Handbook of the University.

HONOR SOCIETIES

Those National Honor Societies which are represented in the University of Scranton are listed below in order of the foundation of the local chapters. An asterisk after the name indicates that this National Honor Society is a member of the Association of College Honor Societies.

ALPHA SIGMA NU*

The National Jesuit Honor Society founded in 1915 with chapters in 27 Jesuit universities throughout the United States. The Scranton chapter was founded in 1943, the oldest Honor Society in the University. The Greek letters signify *adelphotes skolastikon nikephoron*—brotherhood of honor students. Juniors and Seniors who have distinguished themselves in scholarship, loyalty and service are eligible for membership. Appointment is made by the President of the University on the recommendation of the Dean and nomination by chapter members of the Society. By tradition, the Dean of the College is moderator.

The Society annually presents the Alpha Sigma Nu University Award for Teaching. The recipients of the Award:

1969 Prof. Lawrence Mann
1970 Prof. Frank Brown †
1971 Prof. Thomas Garrett
1972 Prof. Michael DeMichele
1973 Prof. Bernard Williams
1974 Rev. Bernard Suppe, S.J.
1975 Rev. Edward Gannon, S.J.
1976 Prof. Robert A. Sallavanti
1977 Prof. John P. McLean

Prof. John McLean, Professor of Accounting; 1977 Winner of Alpha Sigma Nu University Award for Teaching

PHI ALPHA THETA*

International Honor Society in History. Basic requirements: 12 credits in History; Quality Point Index—General 3.0, 3.1 in History. The Mu Rho Chapter was established at the University in 1967.

DELTA MU DELTA*

National Honor Society in Business founded in 1913. Basic requirements: a Quality Point Index of 3.35 with a major in Business Administration or Accounting. The local Omega Chapter was established in 1968-69.

ALPHA SIGMA LAMBDA

National Honor Society to encourage scholarship and leadership among evening students. The Alpha Upsilon chapter was installed here in 1972.

DELTA SIGMA RHO-TAU KAPPA ALPHA*

National Honor Society in Forensics. Founded in 1963 through merger of societies founded in 1906 and 1908 respectively. The local chapter was founded in 1975.

SIGMA PI SIGMA*

National Honor Society in Physics founded in 1921. Its chapters are restricted to colleges and universities of recognized standing which offer a strong physics major. The University of Scranton Chapter receives into membership undergraduate and graduate students. The local chapter was founded in February 1969.

OMICRON DELTA EPSILON

National Honor Society in Economics. Basic requirements: 12 credit hours in Economics with a General QPI of 3.2 and a 3.0 average in Economics. The local Xi chapter of Pennsylvania was founded in May 1969.

PSI CHI*

National Honor Society in Psychology. Founded in 1931, it has established chapters in 260 colleges and universities in 47 states. The local Xi chapter was installed in May 1969.

PHI DELTA KAPPA

International professional fraternity for men and women in education. Membership is limited to graduate students and teachers. The local chapter was founded in 1970.

PI GAMMA MU*

National Honor Society in Social Science. Founded in 1924 to improve scholarship in the social sciences and to encourage inter-disciplinary study. Basic requirements: 20 credit hours in social science; Quality Point Index of 3.0. The local Alpha Epsilon chapter was founded in February 1971.

ETA SIGMA PHI

National Honor Society for students of Classical Languages. The Scranton chapter was founded in November 1972.

PI MU EPSILON

National Honor Society for Mathematics Majors in Junior or Senior year with a general Quality Point Index of 3.0 and a 3.0 average in Mathematics. The local Pennsylvania Mu chapter was installed in February 1973.

ALPHA MU GAMMA

National Honor Society for students of Foreign Languages. Founded in 1931. The Greek letters signify *amphi mouse glosson:* for the muse of languages. The Scranton Epsilon Gamma chapter of Theta Iota was installed in May 1973.

DELTA TAU KAPPA

International Social Science Honor Society founded in 1961 is dedicated to high scholastic achievement. The Pennsylvania Beta chapter was installed at the University of Scranton in October 1975. Requirements: QPI of 3.5 and 20 credits in social science.

PHI LAMBDA UPSILON

Chemical Honorary Society established in 1899. The Scranton Beta Kappa chapter, one of 60 chapters nationwide, was installed in October 1975. For students with 24 credits in chemistry and 3.0 QPI.

ALPHA EPSILON DELTA*

The National Premedical Honor Society founded in 1926. The Pennsylvania Iota chapter was installed at the University in May 1976.

PRE-LAW PROGRAMS

The University is justly proud of its tradition in the field of law. Fully fifty percent of the region's lawyers have done their undergraduate pre-law studies at the University.

The strength of the University's liberal education approach to its pre-law programs is indicated by the record of success its graduates have had in winning admittance to the nation's leading law schools. Graduates of the last graduating class have been admitted to Georgetown and Harvard Law Schools, both of which annually lead all American law schools in admissions selectivity with over 8,000 applications each. University graduates during the same year were admitted to such other law schools as Cornell, Rutgers, NYU, Yale, Boston College, Villanova, Catholic University of America, Temple, U. of Pennsylvania, St. Louis, Dickinson, Boston U., Notre Dame, and twenty other public and private law schools from California to New England.

Pre-Law Curriculum—For admission to law school, no specific undergraduate major is required. In our last senior class, history was the most frequent major among students admitted to law school. However, the departments of political science, languages, business, English, education, sociology, communications, law enforcement and psychology also had their students win admittance to law school. The single most important factor in admission is not therefore a specific major but rather the degree of academic excellence manifested by the student in pursuing whatever major he has chosen for his particular field of competence.

Skills and Courses—The second most important factor in admission to law school is the student's record of achieved skills in the Law School Admission Test (LSAT). The General Education program of the University is designed to enable pre-law students to acquire these skills.

I. Comprehension and Proficiency in Oral and Written Communication:

The University's freshman courses in Oral Communication (Engl. 2) and the Writing Center (Engl. 7) provide a foundation; pre-law students who complete these courses or whose high school record has exempted them, might then take the following courses offered by the faculty:

Comm. 12—Advanced Composition	Phil. 148—Philosophy of Communication
Engl. 114—Debate and Argument	Engl. 124—Creative Writing

The student should also consider participating in the Noel Chabanel Debate Society; the college newspaper; the yearbook; and such campus journals as *Esprit* and *Retrospect.*

II. A Critical Understanding of Human Institutions and Values:

Here the University's courses in the field of history and literature, philosophy and theology are most helpful. The New Curriculum allows students to use courses of interest as cognates to their major program and as part of the humanities area in the General Education program. British and American Constitutional History (Hist. 122-123, 142-143) are especially recommended.

III. Creative Power in Thinking:

Legal studies and legal work demand the ability to think clearly, carefully and in-

dependently. It is important therefore that pre-law students cultivate skills in research, logic and critical analysis. Especially recommended are:

Philosophy 28—Logic
Philosophy 107—Philosophy of Law
Philosophy 133—Business Ethics
English 113—Logic and Rhetoric

Similarly, quantitative skills are needed. The General Education program allows each student the opportunity for some background in the natural and quantitative or social sciences. Especially recommended as electives or cognates to the major program are:

Business 1-2—Accounting
C/LE 151—Forensic Chemistry
Pol. Sci. 133—Social Science Statistics

Pre-Law Internships—Interested students with Quality Point Index above 3.0 at the time of application may, with the approval of the Dean, receive academic credit for internships served in the offices of either private law firms or various legal agencies such as the District Attorney, Public Defender or District Magistrate. Prior approval of the planned internship is necessary. Application forms for these internships are available from the Pre-Law Advisor.

Pre-Law Advisory Team—Continuing advice on course selection, career planning, and the procedures for law school application is provided by a Pre-Law Advisory Team, composed of Dr. Frank X.J. Homer and Dr. Robert Hueston of the History Department, along with the University's Office of Career Services. The Team is assisted by both the:

Pre-Law Advisory Board, a group of regional lawyers which provides for close contact between the local legal community, a range of national law schools, and the University's pre-law program; and the

Pre-Law Society, a student organization which provides a forum for speakers invited on campus to discuss the many aspects of the legal profession.

Dr. Frank Homer, Pre-Law Advisor; Judy Dunn, '77, Harvard Law School; Atty. Joseph G. Quinn, '72, District Magistrate.

PRE-MEDICAL PROGRAMS

The success of the University's pre-medical program has been outstanding. Notwithstanding the fact that 1976 and 1977 were the most competitive years in the history of American medical school admissions, the University of Scranton placed among the top ten percent of American liberal arts colleges in the proportion of its graduates accepted into medical school for those years.

In the past four years, University of Scranton students received over 200 acceptances to medical or dental schools including many of the most prestigious in the country: Georgetown, Columbia, Rutgers, Hershey, Johns Hopkins, University of Pennsylvania, Temple, Thomas Jefferson University, George Washington University, Hahnemann, University of Pittsburgh, Creighton, St. Louis University, Medical College of Pennsylvania, and New Jersey College of Medicine.

In addition, other students were admitted to Schools of Osteopathic Medicine and Surgery, Podiatry, Pharmacy, Veterinary Medicine, and Graduate School programs in biology, chemistry, bio-chemistry, psychology, pharmacology and other health-related fields.

In the 1975-76 academic year, 24 students won admission to American medical schools, 7 others to dental schools, and 5 to podiatry and pharmacy schools.

In 1976-77, 21 students were admitted to U.S. medical schools, 6 others to dental schools, 5 to podiatry and pharmacy schools, 5 to foreign medical schools, and 5 to osteopathy schools.

Pre-Medical Curriculum—Most pre-medical students major in biology. The biology curriculum should be consulted for the specifics of the basic pre-medical program. Students majoring in chemistry or biochemistry at the University are also regularly admitted to medical or dental schools.

The new majors in biochemistry, biophysics, food science/nutritional chemistry, medical technology, are also important in that they provide alternative majors in second, third, or fourth year for those pre-medical students who subsequently choose not to apply to medical school.

Pre-Medical Advisor—The University's Pre-Medical Advisor is Dr. Joseph Evans, chairman of the department of biology. He may be consulted for more details about the University's pre-medical program.

Dr. Joseph T. Evans, Professor of Biology, Chairman of the Biology Department, Pre-Medical Advisor

DEPARTMENTAL PROGRAMS AND COURSES

BIOLOGY

DR. EVANS, *Chairman*

Courses in the Department of Biology are designed to achieve the following objectives: 1. to present the fundamental scientific facts and concepts which are needed for an understanding of the living world and man's relation to it; 2. to prepare students for advanced study or work in other biological fields.

The Bachelor of Science in Biology Program supplies preprofessional preparation meeting all requirements and recommendations of professional schools (medicine, dentistry, veterinary medicine). See p. 46 for data on Pre-Medical Programs. See p. 104 for the related program in Bio-Physics.

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Biol. 1-2	General Biology I-II	4	4
COGNATE	Chem. 11-12	General & Analytical Chemistry	4½	4½
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Biol. 21-22 or 23	Comp. Vertebrate Anatomy or Genetics	4	4
COGNATE	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Math. 13-14 or Math. 14-21	Pre-Calculus Math.—Calculus I Calculus I-II	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Biology	Biology Electives	4	4
COGNATE	Chem. 113	Biophysical Chemistry	4½	
COGNATE	Physics 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective	Elective		3
			18½	20
		SENIOR		
MAJOR	Biology	Biology Electives	4	6
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. T/RS	Philosophy and/or Religious Studies	3	3
Departmental General Education Recommendations: 6 credits English from AREA IV			13	15

TOTAL: 139½ credits

BIOL. 1 & 2
General Biology 8 credits
A comprehensive study of the nature of living organisms, both plant and animal, their structure, function, development and relationships, including the problems of development, heredity, and evolution. 2 hours lecture and four hours laboratory each semester.

BIOL. 3 & 4
General Biological Science 6 credits
The nature of living organisms and general biological principles, as they affect man and in relation to his problems, are stressed in general terms.

BIOL. 21 & 22
Comparative Vertebrate Anatomy 8 credits
(Prerequisite: Biology 1-2) Structure and phylogeny of vertebrate organ-systems, emphasizing mammalian structure in relation to its function. Amphioxus shark and necturus are subjected to detailed laboratory study in first semester and the cat in the second semester. 2 hours lecture and 4 hours laboratory.

BIOL. 23
Genetics 4 credits
(Prerequisite: Biology 1-2 or 3-4) Principles and theories of heredity as developed by experimental breeding, biometrical and cytological methods with their applications to plant, animal and human heredity. 3 hours lecture and 2 hours laboratory.

BIOL. 101
Cellular Biology 4 credits
(Prerequisite: Biology 1-2 or 3-4) Functional dynamics of cellular organelles are explained in terms of the experimental evidence which helped elucidate cellular function. Bioenergetics, molecular evolution, and cytogenetics are also utilized. 2 hours lecture, 4 hours laboratory.

BIOL. 103
Histology 4 credits
(Prerequisite: Biology 21-22) The microscopic structure and the functioning relationships of vertebrate tissues and organs with most attention devoted to the mammal. 2 hours lecture and 4 hours laboratory.

BIOL. 105
Embryology 4 credits
(Prerequisite: Biology 21-22) Comparative study of reproduction, gametogenesis, fertilization, cleavage, morphogenesis, development of organ-systems in frog, chick and pig. 2 hours lecture and 4 hours laboratory.

BIOL. 106
Principles of Heredity 3 credits
A less technical presentation of the principles and concepts of heredity, stressing their practical applications to the problems of plant, animal and human inheritance. 2 hours lecture and 2 hours laboratory.

BIOL. 107
Anatomy & Physiology 3 credits
Fundamentals of structure and function of the human body to develop an understanding of its physical nature and operation.

BIOL. 108
Principles of Ecology 4 credits
(Prerequisite: Biology 1-2 or 3-4) Study of physical, chemical, and biological environmental factors that influence organisms and the interrelationships between organisms from individual to community level. 2 hours lecture, 4 hours laboratory.

BIOL. 112
Marine Biology 4 credits
(Prerequisite: Biology 1-2 or 3-4) Fundamentals of the physical and chemical properties of the ocean. Major life forms, community composition and diverse environments are studied. Field trips and independent studies conducted. 2 hours lecture and 4 hours laboratory.

BIOL. 115
Animal Behavior 4 credits
(Prerequisite: Biology 1-2 or 3-4) Classification of behavior types, development, functional advantages and evolution of behavior, and social and physiological aspects will be studied in lower and higher organisms. 2 hours lecture and 4 hours laboratory.

BIOL. 120
General Physiology 4 credits
(Prerequisites: Biology 21-22, Chem. 101-102, Phy. 1-2) Physiological processes underlying the functioning of the animal organism. Biochemistry of protoplasm, enzymes, irritability, excitation, conduction, contractility, cellular physiology, and functions of mammalian organ-systems. 2 hours lecture and 4 hours laboratory.

BIOL. 121
Microbiology 4 credits
(Prerequisites: Biology 1-2, Chem. 11-12) Structure, function, growth, reproduction, heredity and relationships of bacteria, yeasts, molds, virus, including a brief survey of pathogens, and life cycles of parasitic microzoa, and also an introduction of disease and immunology. 2 hours lecture and 4 hours laboratory.

BIOL. 122
Principles of Immunology 3 credits
(Prerequisites: Biology 121, Chem. 101-102) Chemical and structural basis of antigens and immunoglobulins, their interactions in non-living and living systems. Foundation and immunological consequence of species and tissue specificity.

BIOL. 123
Parasitology 3 credits
(Prerequisite: Biology 1-2) Study of various types of human, animal and plant parasites including host-parasite resistance, tolerance, and immunity. Origin and evolution of parasites also discussed. 2 hours lecture and 2 hours laboratory.

BIOL. 134
Undergraduate Research Variable credit
(Prerequisites: 12 credits in Biology, Chemistry 101-102, Physics 1-2) Individual problems for advanced students with sufficient background in biological and physical sciences. Subject time and credit arranged individually.

BIOL. 150
Electron Microscopy 3 credits
(Prerequisite: Biology 1-2, Consent of instructor) Introduction to the mechanics of the electron microscope with emphasis on standard laboratory techniques, including preparation of materials, sectioning, viewing and photographic analysis. 1 hour lecture and 4 hours laboratory.

University's Electron Microscope used in Biology, Physics and Chemistry research; Dr. G. Srivastava, Ph.D., Univ. of Toronto.

BUSINESS

DR. AMATO, *Dean*

The Business curriculum offers the student a firm foundation in the liberal disciplines as well as a thorough understanding of the Business and Social Science areas. With a view toward eventual contribution to advancement through research and to community and regional development, the stress is on individuality of thought and expression, and the broad knowledge of economics and management necessary for executive responsibility in business and the non-profit sectors such as government and health care.

The Bachelor of Science degree program offers concentrations in Accounting and Business Administration or the student may arrange with the approval of the chairman to follow other specialized programs of concentration. The Internship Program for Accounting Majors is described on page 38. The five-year MBA Program is described on page 36. The program in Chemistry-Business is described on page 57.

ACCOUNTING CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Bus. 1-2	Elementary Accounting I-II	3	3
COGNATE	Math. 3-4	Quantitative Methods I-II	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Bus. 21-23	Intermediate Accounting I-II	3	3
MAJOR	CMPS 126	COBOL Programming		3
COGNATE	Econ. 11-12	Inquiry into Modern Economics I-II	3	3
GE AREA II	Bus. 8-107	Evolution of Mngt. Thought—Marketing*	3	3
GE AREA III	CMPS 21	Introduction to Computer Science*	3	
GE AREA III	Elective	Elective		3
GE AREA V	Phil. 110	Ethics	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Bus. 111-112	Advanced Accounting I-II	3	3
MAJOR	Bus. 13-14	Business Law I; Law for the Accountant	3	3
COGNATE	Bus. 105-106	Business Statistics I-II	3	3
GE AREA II	Psych. 23-149	Fundamentals of Psych.-Industrial Psych.*	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 133	Business Ethics*	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			18	18
		SENIOR		
MAJOR	Bus. 113-114	Cost Accounting I-II	3	3
MAJOR	Bus. 121-123	Auditing Theory—Federal Taxation	3	3
COGNATE	B/Ec 120-126	Money & Banking-Corporation Finance	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies		3
FREE AREA	Elective	Elective	3	
			15	15

TOTAL: 130 credits

An asterisk (*) indicates departmental recommendation.

BUSINESS ADMINISTRATION CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Psych. 23	Fundamentals of Psychology	3	
MAJOR	Bus. 8	Evolution of Management Thought		3
COGNATE	Bus. 1-2	Elementary Accounting	3	3
GE AREA I	Math. 3-4	Quantitative Methods I-II*	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
COGNATE	CMPS 21	Introduction to Computer Science I	3	
GE AREA III	CMPS 127	Introduction to Data Processing*		3
COGNATE	B/Ec. 108-107	Business Organization & Mngt.—Marketing	3	3
COGNATE	Econ. 11-12	Inquiry into Modern Economics I-II	3	3
COGNATE	Soc. 21 or Psych. 148	Principles of Sociology or Social Psych.	3	
GE AREA I	Bus. 22	Managerial Accounting*	3	
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Bus. 13-16	Business Law I-Law for the Administrator	3	3
MAJOR	Bus. 105-106	Business Statistics I-II	3	3
MAJOR	Bus. 170-Elective	Marketing Mngt.-Elective†	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
GE FREE	Elective	Elective	3	
			18	15
		SENIOR		
MAJOR	B/Ec. 120-126	Money and Banking-Corporation Finance	3	3
MAJOR	Elective-Bus. 160	Elective†—Business Decisions	3	3
GE AREA IV	Humanities	Electives	3	6
GE AREA V	Phil. 133	Business Ethics*	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Elective	Elective	3	
			15	15

TOTAL: 127 credits

In both concentrations, departmental recommendations are indicated by an asterisk. Additionally, for both concentrations, the department recommends students take Oral Communication Center (English 2) and Writing Center (English 7) as their Communications Electives in the first two years unless exempted from the communications skill requirement beforehand because of Advanced Placement or extensive extracurricular experience in these areas. (see p. 34).

†Major Electives may be selected from Bus. 150, 157, 171, 172.

BUS. 1
Elementary Accounting I 3 credits
Introductory course designed to give survey of the principles, purposes and procedures of accounting including financial statements, theory of accounts, journalizing, posting, periodic summary of data, special journals, adjusting entries, receivable and inventories. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 2
Elementary Accounting II 3 credits
(Prerequisite: Business 1) A study of the principles of accounting for plant assets-depreciation, the voucher system, property and sales taxes, payrolls, partnerships and corporations. 3 hours lecture and 1 hour laboratory.

BUS. 8
Evolution of Management Thought 3 credits
An investigation of the foundations of management theory necessary for an understanding of current management knowledge. The student will be prepared to evaluate management literature and practices by studying the writings of various authors.

BUS. 13
Business Law I 3 credits
Introduction to the study of law, its nature and administration. The law of contracts, sales, transportation and storage of goods.

BUS. 14
Law for the Accountant 3 credits
(Prerequisite: Business 13) A study of the laws of credit transactions, negotiable instruments, agency employer-employee relationships, insurance and real property.

BUS. 16
Law for the Business Administrator 3 credits
A study of corporations, management of corporations, agency employer-employee relations, labor law, government regulations, insurance, and commercial paper.

BUS. 21
Intermediate Accounting I 3 credits
(Prerequisite: Business 2) A comprehensive study of contemporary accounting theory, concepts and procedures and their application to the various asset classifications of the balance sheet. Current pronouncements of various accounting organizations as they pertain to asset classifications. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 22
Management Accounting 3 credits
(Prerequisite: Business 2) A study of selected accounting techniques required in compiling and interpreting financial data for managerial decision making. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 23
Intermediate Accounting II 3 credits
(Prerequisite: Business 2) Application of contemporary accounting theory to the liability and stockholders' equity classifications of the balance sheet. Current pronouncements of accounting organizations. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 105
Business Statistics I 3 credits
(Prerequisite: Economics 11-12) Statistical investigations. Use of mechanical equipment. Sampling and concept of error. Presentation of data. Frequency distributions. Averages. Dispersion and skewness. 3 hours lecture and 1 hour laboratory. Lab fee: $10.00.

BUS. 106
Business Statistics II 3 credits
(Prerequisite: Business 105) Introduction to the theory of probability. Index numbers. Time series analysis. Correlation and forecasting. 3 hours lecture and 1 hour laboratory. Lab fee.

BUS. 107
Marketing 3 credits
(Prerequisite: Economics 11) Product distribution from its inception to ultimate use by consumer. Market research and analysis. Channels of distribution.

B/Ec 108
Organization and Management 3 credits
(Prerequisite: Business 8 or Economics 12) The major concepts of managerial action deal with planning, organizing, directing and controlling. Knowledge of these key aspects of the management process will provide the student with a framework for decision making.

BUS. 111
Advanced Accounting I 3 credits
(Prerequisite: Business 23) A study of advanced accounting concepts including partnerships, installment sales, consignments, fiduciaries and fund accounting. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 112
Advanced Accounting II 3 credits
(Prerequisite: Business 23) Accounting procedures applicable to multiple business units including home office and branch, business combinations and consolidated statements. 3 hours lecture and 1 hour laboratory. Lab fee.

BUS. 113
Cost Accounting I 3 credits
(Prerequisite: Business 2) Theories, techniques, and procedures in cost accumulation, reporting, and control including the Cost Accounting cycle, job order costs, process costs, detailed coverage of materials, labor and overhead costing, and joint and by-product costing. 3 hours lecture, 1 hour laboratory. Lab fee.

BUS. 114
Cost Accounting II 3 credits
(Prerequisite: Business 113) Cost planning, analysis, and control including: budgeting—profit planning and objectives, cash budget and forecast statements, non-manufacturing and non-profit organizations; standard costs and variance analysis; direct costing and the contribution margin. Lab fee: $15.00.

B/Ec 120
Money and Banking 3 credits
(Prerequisite: Economics 11) A survey of money credit and prices and their effects on economic stability. Credit controls of Federal Reserve System.

BUS. 121
Auditing Theory 3 credits
(Prerequisite: Business 21) A review of generally accepted accounting principles and applicable auditing principles, standards and procedures. Auditing original records and assets. Automation and the examination of electronically prepared records. Preparation of work papers. 3 hours lecture and 1 hour laboratory. Lab fee: $15.00.

BUS. 123
Federal Taxes 3 credits
An introductory course covering pertinent phases of federal income taxation. Emphasis on business transaction, preparation of individual, partnership and corporate returns and finding the answers to federal tax questions.

B/Ec 126
Corporation Finance 3 credits
(Prerequisite: Economics 12) The financial structure and problems of business corporations. Planning for profitability. Introduction to capital budgeting techniques.

BUS. 150
Traffic Management 3 credits
(Prerequisite: Economics 11-12) This course is designed to introduce the student to the field of transportation. A broad survey of modes of transportation is presented examining inherent advantages of economic conditions of each.

BUS. 151
Industrial Engineering & Factory Management 3 credits
Application of organization principles to functions and personnel of production department of modern plant. Job study analysis, time-motion study, wage systems, incentives and control of labor costs.

BUS. 157
Economic Problem of Transportation 3 credits
(Prerequisite: Economics 11-12) Designed to examine in detail the macro and micro economic characteristics peculiar to transportation industries. Emphasis placed on cost structures of carriers, economics of scale, discriminatory pricing and need for regulation.

BUS. 160
Business Decision Making 3 credits
For seniors only. An integrating course designed to formulate and evaluate business decisions and policies with respect to company operations. The case method, role playing and a business game will be used to supplement readings.

BUS. 170
Marketing Management 3 credits
(Prerequisite: Business 107) Managerial problems of product development and distribution. Product promotion. Personal and mass distribution. Pricing.

B/Ec 171
Financial Administration 3 credits
(Prerequisite: Economics 11 and 12) Introduction to investment timing, personal portfolio management and institutional investment trends.

BUS. 172
Administrative Practices 3 credits
(Prerequisite: Business 108) Human behavior within the organization structure is examined by surveying current theories and practices. The case method will be utilized to present examples of corporate situations.

BUS. 191-194
Guided Independent Study Variable credit
A tutorial program open to Honors students only. Content determined by mentor.

CHEMISTRY

DR. APPLETON, *Chairman*

The aims of the department are to train the student in analytical skills, scientific methodology and the character traits indispensable to the scientist as well as to prepare him for a position of responsibility, as an advanced student in a graduate or professional school or as a member of the staff of an educational, industrial or research institution.

In the last two academic years, seniors graduating from the department were admitted to Georgetown Medical and Dental School, Hershey Medical School, University of Pittsburgh and Thomas Jefferson University Medical Schools, University of Kansas Medical School, College of New Jersey Medical and Dental Schools, Temple, and awarded fellowships toward the pursuit of Ph.D. degrees at several other institutions.

The department offers five concentrations: Chemistry, Biochemistry, Food Science and Nutritional Chemistry, Chemistry-Business, Medical Technology. The program in Chemistry is accredited by the American Chemical Society. In addition, the Chemistry and Biochemistry concentrations are offered in conjunction with the Graduate School in five-year B.S.-M.A. degree programs. The strength of the department is indicated by the latest statistics of the American Chemical Society which report that the University of Scranton is one of the largest producer of master's degrees in chemistry in the country.

CHEMISTRY CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Math. 13-14	Pre-Calculus Math & Calculus I	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Math. 21-22	Analysis II-III	4	4
COGNATE	Physics 11-12	Elements of Physics	4	4
GE AREA II	Social/Behavior	Elective		3
GE AREA III	Communications	Electives	6	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 103-125	Organic Chem. III-Instrumental Analysis	5	5
MAJOR	Chem. 123-124	Physical Chemistry I-II	4½	4½
MAJOR	Chem. 127-128	Chemical Literature-Seminar	1	1
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			19½	19½
		SENIOR		
MAJOR	Chemistry	Electives in Chemistry	3	3
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE AREA FREE	Elective	Elective		3
			12	12

TOTAL: 136 credits

Majors meeting all requirements of the American Chemical Society require four credits of chemistry in addition to the above; these are taken in senior year. Among the electives to be taken are Chem. 129, 130, 136; additionally Chem. 132 is strongly recommended.

BIOCHEMISTRY CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biol. 1-2	General Biology I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	15½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biol. 121-120	Microbiology—General Physiology	4	4
COGNATE	Math. 13-14	Pre-Calculus Math & Calculus I	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 103-125	Organic Chemistry III—Instrumental Analysis	5	5
MAJOR	Chem. 127-128	Chemical Literature—Seminar	1	1
COGNATE	Phys. 1-2	General Physics	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
			19	19
		SENIOR		
MAJOR	Chem. 113-114	Biophysical Chemistry I-II	4½	4½
MAJOR	Chem. 121-122	Biochemistry I-II	3	3
GE FREE	Elective	Elective	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			19½	16½

TOTAL: 144 credits

The Bachelor of Science in Biochemistry Program parallels the B.S. in Medical Technology for the first two years so that opportunity is afforded the student to change from one program to the other. In both the Chemistry and Biochemistry Program, the departmental General Education Area recommendations are: 6 credits of modern language from Area III or Free Area; 3 credits of Computer Science 20 from Area III; English or history electives from Area IV.

B.S. IN MEDICAL TECHNOLOGY CONCENTRATION

The Bachelor of Science in Medical Technology degree program is designed to train and qualify students as Medical Technologists serving in hospitals or clinical laboratories. The program meets and exceeds the requirements of the American Society of Clinical Pathologists.

The program involves the satisfactory completion of the first three years of a curriculum of study (indicated below) at the University of Scranton and the fourth year of Internship at a hospital having a School of Medical Technology approved by the A.S.C.P. and affiliated with the University. To date the University has arranged affiliation with hospitals in such cities as Trenton, New York, Allentown, Bryn Mawr, Williamsport, Rochester, Paterson, Troy, Erie, Akron, and Wilkes Barre among others.

The curriculum for the B.S.M.T. parallels the B.S. in Biochemistry program so that the student has the option to change to the latter after three years in the technology program, should he decide on graduate studies rather than laboratory work.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biol. 1-2	General Biology I-II	4	4
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biol. 121-120	Microbiology-General Physiology	4	4
COGNATE	Math. 13-14	Pre-Calculus Math—Calculus	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19½	19½
		JUNIOR		
MAJOR	Chem. 121-125	Biochemistry I—Instrumental Analysis	3	5
COGNATE	Phys. 1-2	General Physics	4	4
COGNATE	Biology Elective	Genetics, Cellular Bio., Parasitology	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Electives	3	3
			19	18
		SENIOR		
		Internship-Hospital		
MAJOR		Chemistry	3	3
MAJOR		Hematology	2	2
MAJOR		Serology	2	2
MAJOR		Urinalysis	2	2
COGNATE		Bacteriology	2	2
COGNATE		Blood Bank	1	1
COGNATE		Histology	2	2
			14	14

TOTAL: 138 credits

N.B. There is a $50 Internship Fee charged for each semester of senior year to cover University administrative costs. The student is not, however, charged tuition for the credits earned in senior year.

As Communications Electives, English 2 and English 7 are recommended.

As Social Science Electives, at least one course in psychology is recommended.

CHEMISTRY-BUSINESS CONCENTRATION

The Chemistry-Business concentration combines theoretical and technical instruction in Chemistry with management training in Business. Graduates of this program will be concerned not only with chemical research and technological development but also with management problems in science-related industries.

Most chemistry majors tend to be research-oriented although almost half of the approximately 100,000 chemists employed in American private industry are engaged in work other than research and development: management, marketing and sales. This combined degree was formulated to prepare chemists to assume these latter responsibilities.

From the point of view of the business student, almost one-third of all business graduates can expect to be employed in a chemistry-related field: pharmaceuticals, plastics, petroleum, etc. Most business majors employed in such industries must develop, often on their own, the technical knowledge needed to understand their company's operations and products. A fundamental background in chemistry as provided in this concentration is a distinct advantage to individuals planning such a career.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chem. 11-12	General Analytical Chemistry I-II	4½	4½
MAJOR	Bus. 8	Evolution of Management Thought	3	
COGNATE	Math. 13-14	Pre-Calculus Math—Calculus	4	4
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chem. 101-102	Organic Chemistry I-II	4½	4½
MAJOR	Bus. 108	Business Organization & Mngt.	3	
MAJOR	Bus. 13	Business Law	3	
GE AREA II	Econ. 11-12	Inquiry into Modern Economics I-II*	3	3
GE AREA III	CMPS 21-127	Intro to Computer Science-Data Process.*	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			17½	17½
		JUNIOR		
MAJOR	Chem. 171-128	Industrial Chemistry & Seminar	3	1
MAJOR	Bus. 1-2	Elementary Accounting I-II	3	3
MAJOR	Bus. 105 or 106	Business Statistics	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives		6
GE AREA V	Phil. 133-T/RS	Business Ethics*-Theology Elective	3	3
			15	16
		SENIOR		
MAJOR	Bus. 103-107	Money & Banking—Marketing	3	3
COGNATE	Phys. 1-2	General Physics	4	4
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Phil.-T/RS	Elective		3
GE FREE	Elective	Elective		3
			13	16

An asterisk (*) indicates departmental recommendation.

TOTAL: 129 credits

FOOD SCIENCE AND NUTRITIONAL CHEMISTRY

This program is designed to train and furnish scientists and technologists who can bring to bear the chemical background necessary to analyze, produce, and create new products and processes in foods and nutrition.

It is intended that those completing this program will be prepared to enter upon an industrial career in research, development and/or production of food and agricultural products. In addition, they will be prepared to engage in graduate work towards a Master or Doctoral degree in Food Science or an allied field.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Chemistry 11-12	General Analytical Chemistry I-II	4½	4½
COGNATE	Biology 1-2	General Biology I-II	4	4
GE AREA II	Social/Behavioral	Elective		3
GE AREA III	Communications	Elective	3	
GE AREA V	Philosophy 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd. 20	Dynamics of World Hunger		3
PHYS EDUC	Ph. Ed. 1-2	Basic Phys. Ed.	1	1
			15½	18½
		SOPHOMORE		
MAJOR	Chemistry 101-102	Organic Chemistry I-II	4½	4½
COGNATE	Biology 121	Microbiology	4	
COGNATE	Math. 13-14	Pre-Calculus Math.—Calculus	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Phys. Ed.	1	1
			19½	15½
		JUNIOR		
MAJOR	Chemistry 121-125	Biochemistry I & Instrumental Analysis	3	5
MAJOR	Chemistry 177	Enzymology		3
MAJOR	Chemistry 172-128	Food Chemistry & Nutrition —Seminar	3	1
COGNATE	Physics I & II	General Physics	4	4
GE AREA II	Social/Behavioral	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Philosophy 110	Ethics	3	
GE AREA V	T/RS	Theology-Religious Studies Elective		3
			19	19
		SENIOR		
MAJOR	Chemistry 113-114	Biophysical Chemistry	4½	4½
MAJOR	Chemistry 173-4	Agricultural Chemistry I-II	3	3
MAJOR	Chemistry 175	Food Analysis		3
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Philosophy-T/RS	Philosophy-Religious Studies Electives	3	3
			16½	16½

TOTAL: 140 credits

CHEM. 11 & 12
General and Analytical Chemistry 9 credits
A study of the laws, theories and principles of general chemistry together with qualitative and quantitative analysis. Laboratory work covers semi-micro techniques for qualitative analysis and gravimetric and volumetric analysis. 3 hours lecture and 3 hours laboratory each semester.

CHEM. 101 & 102
Organic Chemistry I-II 9 credits
(Prerequisites: Chemistry 11-12) An introduction to the chemistry of the principal aliphatic and aromatic compounds of carbon and their derivatives. Laboratory work includes investigation of the chemical properties and synthesis of the compounds studied. 3 hours lecture and 3 hours laboratory each semester.

CHEM. 103
Organic Chemistry III 5 credits
(Prerequisites: Chemistry 101-102) A continuation of Chemistry 101-102, emphasizing the study of the major types of organic mechanisms. Laboratory work involves advanced techniques. 2 hours lecture, and 6 hours laboratory.

CHEM. 113
Biophysical Chemistry I 4½ credits
(Prerequisite: Chemistry 101-102) An introduction to the application of physical-chemical principles to biological problems. This involves aqueous solutions, colloidal chemistry, thermodynamics, electro-chemistry, chemical kinetics and nuclear chemistry. Laboratory work involves mainly experiments dealing with colloidal phenomena, chemical kinetics and nuclear chemistry. 3 hours lecture, 3 hours laboratory.

CHEM. 114
Biophysical Chemistry II 4½
(Prerequisite: Biophysical Chemistry I) A study of the bioenergetics, enzyme kinetics and cryobiochemistry as related to cellular phenomena. Laboratory work includes enzyme kinetics, energetics and special projects. 3 hours lecture, 3 hours laboratory.

CHEM. 121
Biochemistry I 3 credits
(Prerequisites: Chemistry 102 & 124) Principles of biochemistry and biophysical chemistry including enzyme kinetics. A study of the chemical nature of lipids, carbohydrates, proteins, nucleic acids and enzymes including relationships between vitamins, hormones and inorganic compounds. 3 hours lecture.

CHEM. 122
Biochemistry II 3 credits
(Prerequisite: Chemistry 102 & 124) A study of the metabolism, digestion and absorption of carbohydrates, lipids, amino acids and proteins, including energy transformations together with the role of enzyme systems in the above processes. 3 hours lecture.

CHEM. 123 & 124
Physical Chemistry I-II 9 credits
(Prerequisites: Chemistry 11-12, Mathematics 21-22) A study of the physicochemical properties of matter and the dynamics of chemical reactions. Laboratory experiments illustrate the principles studied. 3 hours lecture and 3 hours laboratory each semester.

CHEM. 125
Instrumental Analysis 5 credits
(Prerequisite: Chem. 123) Instrumental methods of analysis consisting of theory and application of such instrumental techniques as spectroscopy, polarography and instrumental titrimetry. Laboratory stresses instrumental analysis and techniques. 2 hours lecture and 6 hours laboratory.

CHEM. 127
Chemical Literature 1 credit
A study of the published source material of chemical science and chemical industry. The course includes practical instruction in library technique. 1 hour lecture.

CHEM. 128
Seminar 1 credit
(Prerequisites: Chemistry 101-102, 123-124) A discussion of advanced topics in chemistry for students majoring in chemistry. Assignments will be made from various areas of chemistry and full discussion by the participants is expected. 1 hour each week.

CHEM. 129
Physical Chemistry III 3 credits
(Prerequisites: Chemistry 124) Special topics including classical and quantum statistics and thermodynamics, molecular and solid state structure and quantum chemistry. 3 hours lecture.

CHEM. 130
Inorganic Chemistry 3 credits
(Prerequisite: Chemistry 124) Descriptive chemistry of selected elements and their compounds correlated with the periodic table physical properties, atomic, and molecular structure, bonding and the ligand theory. 3 hours lecture.

CHEM. 132
Undergraduate Research 3 credits
(Prerequisites: Chemistry 102, 124 & 127) Individual study and research in connection with a specific chemical problem. The course taken with the permission of the Chemistry Staff.

CHEM. 147-148
Intermediate Physical Chemistry 6 credits
A review of the fundamentals of chemical principles, and a treatment of the mathematics requisite for such review. This course is designed for prospective graduate students in the M.S. and M.A. programs in Chemistry with a deficiency in Physical Chemistry and Calculus.

CHEM. 150
Chemistry and Action of Drugs 3 credits
Introductory study of physiological and psychological effect of commonly used drugs on humans. Drug action in relation to molecular biological structure and function. No prerequisites.

C/LE 151
Forensic Chemistry 3 credits
No prerequisite. Designed for law enforcement majors as well as science majors, this is a study of the rules of evidence and the position of the expert scientific witness in law, followed by a review of the uses of scientific, and particularly chemical, evidence in various phases of the investigation and trial of criminal actions.

CHEM. 170
Chemistry and the Economy 3 credits
Designed to give chemists or biologists a pragmatic introduction into the business practices which govern the management of chemical corporations.

CHEM. 171
Industrial Chemistry 3 credits
A review of chemical operations and unit or batch processes common to the industry. Econometric analysis involving supply-demand, productivity, commodity prices and costing is an important area covered. Measures of productivity and patent activity. 3 hours lecture.

CHEM. 172
Food Chemistry and Nutrition 3 credits
The chemistry and nutritional characteristics of natural and processed foods. This includes carbohydrates, lipids, proteins, minerals, vitamins, food additives and enzymes.

CHEM. 173
Agricultural Chemistry I 3 credits
The photosynthetic aspects and biochemical energetics in plant production. The chemistry and use of fertilizers and pesticides. The relationships between food production and various methods in pest control and soil enrichment. Physical, biological and chemical aspects of agricultural production.

CHEM. 174
Agricultural Chemistry II 3 credits
Physical and chemical properties of soils and their improvement by physical, chemical and biological means. The relationships between naturally occurring plant toxins, mycotoxins and food production. Agricultural application of basic principles.

CHEM. 175
Food Analysis 3 credits
The course will involve both the "official methods of analyses" and newer research methodologies. Materials to be analyzed include food, vitamins, cosmetics and drugs. Both inorganic and organic compounds will be evaluated by wet and instrumental methods.

CHEM. 177
Enzymology 3 credits
A course in the chemical nature of enzymes with relation to mechanisms of enzyme action and kinetics, Purification and identification of enzymes and isoenzymes. Biochemical and physiological aspects of enzymes in living systems.

COMMUNICATIONS

DR. McINERNEY, *Chairman*

This program introduces the student to the human dimension of the communications process. Although coordinated by the chairman of the English department, the program is multi-disciplinary in that it includes courses from several other departments. Thus, within a Liberal Arts context, the humanistic denominator in Communications from Rhetoric and Interpersonal Relations to Man in Mass Media is explored.

Theory and practice are combined in the classroom and supplemented with co-curricular activities plus on and off campus Internships to develop the students' Communications skills.

This approach prepares students for career entry into certain areas of Radio, Television, Journalism and other related Communications activities or graduate and professional study.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Comm. 8-10	Inquiry—Interpersonal Communication	3	3
MAJOR	Engl. 113 or Phil. 28	Logical & Rhetorical Analysis or Logic		3
COGNATE	Soc. 21	Principles of Sociology	3	
COGNATE	Psych. 23	Fundamentals of Psychology		3
GE IV	Humanities	Electives	3	3
GE V	Phil. 20	Introduction to Philosophy	3	
GE V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Comm. 115	Introduction to Linguistics	3	
COGNATE	Comm. 9-Elective	Biophysics of Comm.—Elective	3	3
COGNATE	Electives	Electives	3	3
GE I	Physics 25-26	Role of Electronics in Communication*	3	3
GE II	Psych. 149	Industrial Psychology*		3
GE V	Phil. 110	Ethics	3	
GE V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Electives	Electives	6	6
COGNATE	Phil. 135	Ethics of the Interpersonal Encounter		3
COGNATE	Elective	Elective	3	
GE II	Social/Behavior	Elective	3	
GE IV	Humanities	Electives	3	3
GE V	Phil.-T/RS	Electives	3	3
			18	15
		SENIOR		
MAJOR	Comm. 180-181	Seminar	3	3
MAJOR	Elective	Internship/Elective	3	
COGNATE	Elective	Elective		3
GE I	Nat. Sci./Quant.	Elective	3	
GE IV	Humanities	Electives	3	3
GE FREE	Electives	Electives	3	6
			15	15

*Asterisk indicates Recommended Courses.

TOTAL: 127 credits

COMM. 8
Communication Inquiry 3 credits
An investigation of the nature of human communications and an introduction to the writing of communications scholars in order to expose the thought, the logic and the criteria of the field. Emphasis placed on importance of interdisciplinary approach to an area of study that touches virtually all human activity.

COMM. 9
Biophysics of Communication 3 credits
Designed primarily for Communication majors, this course considers waves, energy and information theory. Chemical messages, biological information processing in audio, visual and internal modes. Brain lesions, input saturation and problems in communication.

COMM. 10
Interpersonal Communication 3 credits
(Prerequisite:Comm. 8) An exploration of essential components of interpersonal communication, emphasizing the confluence of these details into a single, continuing event. Attention is called to the significance of this process as one in which all must participate, not only for personal development, but also for effective negotiation with others.

COMM. 12
Advanced Composition 3 credits
(Prerequisite: English 7 or Exemption) The purpose of this course is to review, practice and apply the principles of a rhetoric of order, stressing invention, disposition, style, tone and theme. (GE Area III)

COMM. 106
Man and Mass Media 3 credits
A study of the development of films, radio, and television in 20th Century America; the basic techniques by which they communicate and the ways in which they interact with other factors to shape our culture. (GE Area III)

COMM. 107
History of Cinema 3 credits
A study of the historical development of motion pictures. Practitioners in America and throughout the world are treated in this concise history of cinema. Film Screening fee: $10.00 (GE Area IV)

COMM. 108
The Art of Cinema 3 credits
The study of the artists, technicians and businessmen who make films. Taped interviews of internationally famous film makers, as well as an analytic scrutiny of modern films, develop students' intelligent, active participation in the major art form in modern culture. Film screening fee: $10.00 (GE Area IV)

COMM. 109
Literature and Film 3 credits
A study of the substance and structure of the most popular film genre in short, experimental, and feature length. Special concentration in the translation of literature (stories, novels, plays) to screen is featured. Film screening fee: $10.00. (GE Area IV)

COMM. 110
Film Criticism 3 credits
A study of the grammar, poetics, rhetoric, and aesthetic of film critics constitute the heart of this course. Film screening fee: $10.00 (GE Area IV)

COMM. 115
Introduction to Linguistics 3 credits
An attempt to understand the systematic ways in which human communication is achieved. A particular emphasis will be put on an investigation of the findings of linguistic scholarship, especially with regard to the workings of the English language.

COMM. 116
Broadcasting 3 credits
A study of those forces which produce any broadcast system: physical, historical, economic and social. Emphasis is placed on demonstrating how those forces converge to compose broadcasting in the United States. (GE Area III)

COMM. 117
Broadcast Programming
A study of broadcast formats, program assembly, and creative programming. Opportunity is provided for the student to construct programs suitable for broadcasting within this framework.

COMM. 118
Educational Television 3 credits
Use of the television media for instructional purposes both public and classroom. Current usage by Educational Television Stations and secondary schools including both broadcasting and closed circuit television. Types of educational programs are evaluated. A final classroom instructional situation is presented by each student in his own discipline. Lab. Fee: $8.00 (GE Area III)

COMM. 119
Introduction to Journalism 3 credits
(Prerequisite: English 7 or Exemption) Organization and functions of newsgathering. Relationships among different news media, responsibilities of journalistic institutions and role of press in society; student is introduced to newsgathering and newswriting techniques employed in various media. (GE Area III)

COMM. 120
Advanced Journalism: Newspapers 3 credits
(Prerequisite: Comm. 119) Features: sharp focus, short leads, supporting quotations; defining, explaining, evaluating "trend" stories; rewriting; in-depth articles; editorials; series. (GE Area III)

COMM. 121
Broadcast Journalism 3 credits
(Prerequisite: Comm. 119) Broadcast Journalism skills are refined through assignments and classroom critiques. Production techniques including film and tape editing are discussed and the student is introduced to the techniques of assembling radio and television newsprograms. (GE Area III)

COMM. 123
Advanced Broadcast Journalism: Radio-TV Documentary Production 3 credits
(Prerequisite: Comm. 119 or 121) Network and local station documentary broadcasts and a "hands on" opportunity to work with film and tape in the production of mini-documentaries and full-length programs. Some course projects may be accepted for broadcast by a local television station. Lab fee: $16.00.

COMM. 125
The Story of Magazines 3 credits
(Prerequisite: Comm. 119) In this course, the student will trace the history of magazines, starting with their English origins and continuing on to American magazines. Also, the course will treat the case history of a magazine feature, i.e., its conception, procedure, research, writing, editing illustration, and final publication.

COMM. 128
Television Production 3 credits
"Behind the scenes" operation of television production. Included are discussions of types of shows, rationale for each, and production techniques peculiar to each. An opportunity to produce, tape and direct a show using one of the techniques will be a major class project. Lab. Fee: $8.00 (GE Area III)

COMM. 130
Mass Communications Management 3 credits
The unique role of the manager in mass communications warrants this study of typical management decisions which range from content consideration to sales to contract negotiations with personnel.

COMM. 131
Comparative Systems of Mass Communications 3 credits
(Prerequisite: English 2 or Exemption) The press and broadcasting systems of a number of selected nations are studied in light of the political, social and economic forces which shape the systems.

COMM. 161
Theater Practicum 3 credits
(Prerequisite: English 7 and an additional English course from 20-27 sequence.) A course that permits the student to specialize in a period or particular playwright's work and to produce a representative play. Acting, make-up, lighting, and set design. (GE Area III)

COMM. 173
Public Relations 3 credits
(Prerequisite: Comm. 119) Introduction to the field of organizational public relations. Through the case method, the student obtains an overview of the public relations profession and an appreciation of policy-making decisions. Techniques of public relations practices are also covered. (GE Area III)

COMM. 175
The Art of the Editor 3 credits
(Prerequisite: Comm. 119) The class will study in detail the laboratory conceptualization of a "new contemporary magazine" and follow its editorial and publishing metamorphoses through to its launching on a national market.

COMM. 180-181
Senior Seminar 6 credits
In order to provide majors with the opportunity of synthesizing their varied educational experiences, this seminar will be interdisciplinary in nature. The first semester will utilize speakers from various communication media. The second semester is devoted to individual research topics designed to help the student acquire expertise in the communication field of his choice.

COMPUTER SCIENCE

PROF. PLONSKY, *Director*

A computer science major studies the methods of storing, representing, and transforming information using a digital computer. The strength of the department is indicated by the publications of its faculty as well as their participation in ACM and IEEE activities.

Because of the diverse applications of computing, a limited set of cognates is not designated. The normal cognates are mathematics, statistics, and various areas in business. Every computer science major must fulfill certain cognate requirements. These requirements are one mathematics sequence (Math 3-4, Math 13-14, or Math 14-21), one statistics course (normally Math 44, Math 102, or Math 104), and one business sequence (normally Bus 1-2).

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	CMPS 20-25	Introduction I-II	3	3
COGNATE	Math. 3-4 or 14-21	Quantitative Methods or Calculus I-II	3/4	3/4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16/17	16/17
		SOPHOMORE		
MAJOR	CMPS 100-110	Assembly Lang. Prog.—Data Structures	3	3
COGNATE	Elective	Electives	3/4	3/4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Theology	Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16/17	16/17
		JUNIOR		
MAJOR	CMPS 101-Elective	Systems Organ. & Programming—Electives	3	9
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics	3	
GE FREE	Elective	Elective		3
			15	18
		SENIOR		
MAJOR	CMPS 120-Electives	Computer Projects-Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	15

TOTAL: 127-131 credits

General Education recommendation: for AREA III, English 2 (Oral Communication Center) and English 7 (Writing Center) are recommended except for students with Advanced Placement in English or extensive high school experience in speech and writing.

CMPS. 20
Introduction to Computer Science I 3 credits

Introduction to computer programming using the FORTRAN compiler. Flow-charting algorithms and programming techniques. Applications from mathematics and the natural sciences emphasized. Lab. Fee: $40.00.

CMPS. 21
Programming for Business and Social Science 3 credits
This course is basically the same as CMPS. 20 except that applications from the social sciences, business, and accounting will be emphasized. Lab. Fee: $40.00.

CMPS. 25
Introduction to Computer Science II 3 credits
This course will emphasize non-numeric computer applications. Implementation of queues, pushdown stores, and tree structured data. A second language, ALGOL, is introduced and implemented. Pre: CMPS. 20/21. Lab. Fee: $40.00.

CMPS. 100
Assembly Language Programming 3 credits
An introduction to assembler programming. Among the topics discussed will be machine organization, the representation of data, the assembler, input-output routines and the use of macros. Pre: CMPS. 20/21. Lab. Fee: $40.00.

CMPS. 101
System Organization and Programming 3 credits
The analysis and design of computer systems including debugging, operating system design, and the implementation of multiprogramming. Prerequisite: CMPS. 100.

CMPS. 110
Data Structures 3 credits
The representation and transformation of information. This course stresses the interrelation between data structure and program structure. Included will be an elementary discussion of compiler structure. Prerequisite: CMPS. 100.

CMPS. 120
Computer Projects 3 credits
In this course students present computer projects of their choice to be evaluated by the instructor and their fellow students. Prerequisite: Senior computing majors only.

CMPS. 123
Operations Research 3credits
Introduction to the basic mathematical modeling and simulation techniques used in the business environment. Use of basic operations-research techniques including linear and dynamic programming, simulation, queuing theory. Prerequisite: CMPS. 20/21 and Math 4 or 14.

CMPS. 125
Artificial Intelligence 3 credits
Problem solving under uncertainty, Heuristic Programming Techniques, Tree speed-up techniques, analysis of chess and other non-well determined games, learning mechanisms, forgetting machines. Can computers think? Prerequisite: CMPS. 110.

CMPS. 126
COBOL Programming 3 credits
Introduction to ANSI standard COBOL for computer science and business majors. Structured programming approach to COBOL and use of sequential files. Prerequisite: CMPS. 20/21. Lab Fee: $40.00.

CMPS. 127
Information Systems 3 credits
Introduction to concepts and practices of information processing. Emphasis on computerized system requirements and techniques in providing appropriate decision-making information to management. Prerequisite: CMPS. 20/21. Lab. Fee: $40.00.

CMPS. 130
Numerical Analysis 3 credits
A survey of computer-oriented techniques for integration, differentiation, matrix computation, solution of simultaneous equations, and analysis of errors. Prerequisite: CMPS. 20/21 and Math 14.

CMPS. 136
Advanced COBOL 3 credits
Continuation of CMPS. 126 in implementation of COBOL programming language to data processing problems. Use of special procedure verbs, Report-Writer feature, magnetic tape, direct-access storage devices. Subprograms. For accounting and computer science majors. Prerequisite: CMPS. 126. Lab. Fee: $40.00.

CMPS. 138
Business Systems Analysis 3 credits
(Prerequisite: CMPS. 127) A study of the development of systems analysis techniques including current methods which emphasize a structured programming approach.

CMPS. 140
Foundations of Computer Science 3 credits
An introduction to the foundations of computer science taken from logic, recursive functions theory, turing machines, automata theory, and formal language theory. Prerequisite: CMPS. 110 or Math 108.

CMPS. 150
Compilers 3 credits
Practical and theoretical aspects of programming languages, compilers, and compiler writing. Prerequisite: CMPS. 110.

ECONOMICS

DR. AMATO, *Dean*

Courses in economics are designed to provide the terminal student and the prospective graduate student with a solid understanding of the economic forces which are part of the structure of our society. Courses are also designed to provide a basic understanding of economic theory for students from other disciplines.

Candidates for the Bachelor of Science Degree in Economics must take the following courses: Econ. 11, 12, 102, 115, 116, B/Ec. 120 and six other economics courses. Students should note that upper-division economics courses are offered on a 3-year cycle.

Cognate areas for Economics Majors are: Accounting, Business Administration, Computer Science, Political Science, Sociology, and Statistics.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Econ. 11-12	Inquiry into Modern Economic Society	3	3
COGNATE	Bus. 1-2	Elementary Accounting I-II	3	3
GE AREA I	Math. 3-4	Quantitative Methods I-II*	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Course	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Economics	Required or Elective Economic Courses	6	3
COGNATE	Electives	Electives in Cognate Areas	3	3
GE AREA III	Elective	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Economics	Required or Elective Economics Courses	6	6
COGNATE	Bus. 105-106	Business Statistics I-II	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	CMPS 21	Introduction to Computer Science*	3	
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			18	15
		SENIOR		
MAJOR	Economics	Required or Elective Economics Courses	6	3
COGNATE	Electives	Electives	3	3
GE AREA IV	Humanities	Electives	3	6
GE FREE	Electives	Electives	3	3
			15	15

An asterisk (*) indicates departmental recommendation.

TOTAL: 127 credits

ECON. 11
Inquiry Into Modern Economic Society I 3 credits
This course uses the inquiry approach. Determinants of aggregate economic activity. The main areas studied are the monetary and banking system, the composition and fluctuations of national income, all as influenced by monetary and fiscal policy. International economics.

ECON. 12
Inquiry Into Modern Economic Society II 3 credits
This course uses the inquiry approach. It will center on the salient characteristics of the modern American economy. Operations of the price system as it regulates production, distribution, and consumption, and as it is in turn modified and influenced by private groups and government.

ECON. 102
History of Economic Thought 3 credits
(Prerequisite: Economics 11-12) This course is a survey of the origins of economic thought. Particular stress is placed on the economic and sociopolitical factors of the time.

ECON. 115
Microeconomic Analysis 3 credits
(Prerequisite: Economics 12) This course centers on the analysis of production and cost theories. The topics studied are pure competition, monopoly, oligopoly, monopolistic competition, factor pricing, resource allocation, and income distribution.

ECON. 116 3 credits
Macroeconomic Analysis (Prerequisite: Economics 11) Course centers on the study of national income accounting, price level fluctuations, problems of full employment, and impact of monetary and fiscal policy on income level and distribution.

B/Ec 120
Money and Banking 3 credits
(Prerequisite: Economics 11) A survey of money credit and prices and their effects on economic stability. Credit controls of Federal Reserve System.

ECON. 151
Labor Economics 3 credits
(Prerequisites: Economics 11 & 12) Employment as a career and a source of income; the measurement of wages, earnings and labor costs; the economics of wage determination; the labor force, employment and unemployment; income and economic welfare.

ECON. 155
Government and Business 3 credits
(Prerequisite: Economics 11) This course analyzes the effectiveness of competition in the American economy; centering on the structure, conduct and performance of American industry and concentrating on public policies of enforcing, supplementing or replacing competition.

ECON. 159
Public Finance and Taxation 3 credits
(Prerequisite: Economics 11) Government expenditures, budgets, intergovernmental fiscal relations, public debt, fiscal policy, and the principles of taxation.

ECON. 161
International Trade 3 credits
(Prerequisite: Economics 11) This course analyzes the economic theory of international trade; the effect of trade on national income; trade restrictions; short and long run capital movements; international financial instruments and institutions.

ECON. 165
Economics of Growth and Development 3 credits
(Prerequisite: Economics 11) Factors and conditions that influence economic growth with particular emphasis on the development of low income countries as both an economic and non-economic process.

ECON. 169
Comparative Economic Systems 3 credits
(Prerequisite: Economics 11) Survey of the utilization of economic resources, production of wealth, and distribution of income under different political economic systems.

ECON. 181
Seminar on Contemporary Economic Problems 3 credits
(Prerequisites: Economics 11, 12) The content varies. This course is geared to independent scholarship by the student.

ECON. 191-194
Guided Independent Study Variable credit
This is a tutorial program open to Honors students only.

EDUCATION

DR. BARONE, Chairperson
PROF. CURTIS, Director of Student Teaching

The aims of the Department of Education are: 1. to develop in the individual those professional competencies required for successful teaching; 2. to offer professional training for certification as a secondary school teacher.

The Department of Education offers teacher education concentrations in the following areas:

Biology	English	German	Mathematics-Physics	
Chemistry	French	Latin	Physics	Spanish
Communications	General Science	Mathematics	Social Studies	

All education majors at the University are accredited by the Pennsylvania Department of Education and the National Council for Accreditation of Teacher Education.

The programs in teacher education lead to certification by the Commonwealth of Pennsylvania, accreditation by NCATE, and reciprocity agreements between Pennsylvania and other states such as New York, New Jersey, Connecticut and Maryland assure that courses will be considered for certification in these states.

Students will be accepted for teacher education only with the approval of the Department of Education.

EDUC. 21
Social Foundations of Education 3 credits
The characteristics of the public school system in the United States; the role of education in our current society and the relationship of schools to other social institutions.

EDUC. 22
Educational Psychology 3 credits
Stress is placed upon growth, development, individual differences, emotions, motivation, learning principles and measurement. (Prerequisite: Psychology 23).

EDUC. 103
Analysis for Teaching 3 credits
A study of the various aspects of learning and the use of knowledge gained in improving instruction. The pupil, pupil-teacher relationship, the community, atmosphere, the instructional process and classroom situations will be studied. (Prerequisite: EDUC. 22).

EDUC. 103L
Junior Year Experience 1 credit
The instruments for analysis developed in EDUC. 103 will be used to collect data in actual classroom situations. Students will be involved with working a school with a cooperating teacher. Must be taken concommitantly with EDUC. 103.

EDUC. 104
Curriculum, Methods and Self-evaluation 3 credits
This course is a practicum for planning courses of study units and lesson plans preparing materials and operating equipment. This will be followed by micro-teaching and practice in evaluating one's own teaching. Emphasis will be on methods and materials as they relate to his own subject field. (Prerequisite: EDUC. 103).

EDUC. 104L
Junior Year Experience 1 credit
Students will continue working with a cooperating teacher. Emphasis will be on utilizing and understanding teacher strategies. Must be taken concommitantly with EDUC. 104.

EDUC. 105
Observation and Student Teaching 8 credits
Observation and study of classroom teaching are combined with actual student teaching under expert supervision. Group conferences and personal interviews with the supervisors. Admission to student teaching is only by approval of the Department of Education.

EDUC. 106
Philosophy of Education 3 credits
An examination of representative modern systematic philosophies of education with a critical analysis of the answers that each system of philosophy provides to the important questions concerning the nature of knowledge, of value, of man and of society.

EDUC. 107
Reading in the Secondary School 2 credits
This course is a study of the reading process with emphasis placed upon understandings and skills needed by secondary school students in their subject fields.

EDUCATION CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Teaching Major	Introductory Courses	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA II	Psych. 23-25	Fundamentals of Psych.-Human Behavior*	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Teaching Major	Required or Elective Courses	6	6
COGNATE	Educ. 21-22	Foundations of Education-Education Psych.	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Soc. 21-22	Basic Sociology-Social Problems*	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Teaching Major	Required or Elective Courses	6	6
COGNATE	Educ. 103-104	Analysis for Teaching—Curriculum/Methods	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			16	16
		SENIOR		
MAJOR	Teaching Major	Electives		6
COGNATE	Educ. 105	Student Teaching	8	
COGNATE	Educ. 107	Reading in the Secondary School	2	
GE AREA III	Communications	Elective		3
GE AREA V	Phil.-T/RS	Philosophy and/or Theology Electives	6	
GE FREE	Electives	Electives		6
			16	15

TOTAL: 127 credits

The above program is for the Secondary Education students majoring in English or Modern Language. Programs for all other certification areas are available from the Education Department.

Education majors in Mathematics and Science should substitute GE AREA IV courses for GE AREA I courses in the above program.

Education majors in Social Studies should substitute GE AREA IV courses for GE AREA II courses in the above program. They will need to schedule History 1, 2, 3, and 4 as Humanities (GE AREA IV) and Soc. 104 as a Free Elective. Psychology 23 and 25, Sociology 21 and 22 will be scheduled in the Social Studies major.

ENGINEERING

PROF. PLONSKY, *Advisor*

The University provides a pre-engineering program which introduces the student to the highly technical training necessary for all phases of the engineering profession. This is a two-year course which enables the student to transfer to an engineering school to complete his degree work.

Of special importance is the University of Scranton's association with the Cooperative Engineering Program at the University of Detroit, and its programs in chemical, civil, electrical, environmental, and mechanical engineering. For the student who has completed the pre-engineering curriculum at the University of Scranton, the Detroit three-year cooperative program offers alternate semesters of formal instruction and work experience in industry.

Other engineering schools into which University of Scranton students transfer include Lehigh, Bucknell, Penn State and Drexel among others.

In addition to the valuable experience gained from industry, many students have been able to pay the cost of their tuition from the remuneration received for their work. This amounts to a substantial equivalent scholarship grant.

ENGINEERING TRANSFER PROGRAM

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN		
MAJOR	Phys. 11-12	Elements of Physics I-II	4	4
COGNATE	CMPS 20	Computer Science	3	
COGNATE	Math. 14-21	Analysis I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			18	15
		INTERSESSION OR SUMMER		
GE AREA	Elective	Humanities, Social Science Elective	3	
		SOPHOMORE		
MAJOR	Ph. 24	Circuit Analysis		4
COGNATE	Phys. 21	Elements of Modern Physics	4	
COGNATE	Math. 22-101	Analysis III - Diff. Equations	4	4
COGNATE	Chem. 11-12	General and Analytical Chemistry	4½	4½
GE FREE	Elective	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16½	16½

TOTAL: 69 credits

ENGLISH

DR. McINERNEY, *Chairman*

The department provides instruction in literature and communication for all students in the College. Literature courses may be chosen for the humanities area (IV) or as cognate courses for other humanities majors. In the basic English major program of 36 credits, 21 are specified below; the student selects the remaining 15 hours as the "specific difference" which individualizes his major program, depending on the student's vocational and intellectual interest—graduate studies in English, law school, journalism, business, etc.

After freshman year, students may propose an alternate major program for departmental approval.
See also the major in Communications which the department coordinates.
The department also offers a 5-year AB-MA program.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Engl. 11-101	English Inquiry I-British Literature	3	3
COGNATE	Electives	Cognate Inquiry or Foreign Language	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA II	Social/Behavior	Elective	3	
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Engl. 102-103	British Literature	3	3
COGNATE	Electives	Foreign Language or other Cognate	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Engl. 104-105—Elec.	Required and Elective Courses	6	6
COGNATE	Hist. 140-141	History of England or other Cognates	3	3
GE AREA II	Social/Behavior	Electives	3	6
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	18
		SENIOR		
MAJOR	English 106-Elec.	Electives	6	6
COGNATE	Electives	Foreign Literature or other Cognates	3	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

The department recommends The Nature of Nature (Intd. 3) as the Interdisciplinary Elective in first year to be followed by the other three courses of the Natural Science Parsegian sequence from Area I.

ENGL. 2
Oral Communication Center 3 credits
A study and application of the skills which are necessary for the attainment of proficiency in oral communication. Laboratory techniques for individualized instruction will be stressed; tapes and other modern media will be used. Successful completion of English 2 fulfills the oral communication skills requirement of the college.

ENGL. 7
Writing Center 3 credits
The writing center, designed both for students with writing deficiencies and students desiring to refine their writing abilities, features laboratory techniques. The laboratory approach allows individual attention by instructor and lab assistants in the exploration of writing in a range of areas; it is augmented by the use of the resources of modern media as writing stimuli. Successful completion of English 7 fulfills the written communication skills requirement of the college.

ENGL. 11
English Inquiry I 3 credits
An exploration of the nature of literary criticism and scholarship. The approach is inductive; the emphasis is on understanding the purposes of the study of literature and on mastering some techniques of that study.

The following literature courses (English 20 through 27) are designed as cognate or general education (humanities) courses for students majoring in fields OTHER than English. It is recommended that English 20 is a good course to begin with; it might well be followed by English 21-22 or 23-24. English 25, 26 or 27 are also good choices to begin with; those three make a coherent combination recommended by the department. English majors are not permitted to fulfill major requirements with these courses.

ENGL. 20
Introduction to Literature 3 credits
A study of the major literary types: prose, fiction, poetry and drama. Relevant examples will be analyzed to develop critical techniques and a critical vocabulary. Writing assignments will be critical in nature.

ENGL. 21
English Literature 450-1800 3 credits
A study of English literature from *Beowulf* to the beginnings of the romantic movement. The emphasis is textual rather than historical.

ENGL. 22
English Literature
1800 to the Present Day 3 credits
A study of English literature from romantic period to the middle of the twentieth century. The emphasis again is textual and critical.

ENGL. 23
American Literature through the
Romantic Period 3 credits
A study of major figures in America's literature from the colonial period through the age of transcendentalism including such figures as Edward Taylor, Jonathan Edwards, Hawthorne, Thoreau, Emerson, Melville, and Whitman.

ENGL. 24
American Literature to the
Present Day 3 credits
The study of major figures in America's literature from the beginnings of realism to today's literature of revolt. Included will be such disparate authors as Twain, Dickinson, Dreiser, Lewis, Hemingway, Fitzgerald, Ginsberg.

ENGL. 25
Introduction to Fiction 3 credits
An exploration of the nature of prose fiction, its elements and techniques. The emphasis is critical rather than historical. The range of works and the specific selections may vary with the individual instructor.

ENGL. 26
Introduction to Poetry 3 credits
An exploration of the nature of poetry, its value, aims, and techniques. The emphasis will be critical rather than historical. The range of poems and the specific selections will be the choice of the individual instructor.

ENGL. 27
Introduction to Drama 3 credits
An exploration of the nature of drama, its types, techniques, and conventions. The emphasis will be critical rather than historical.

ENGL. 101
British Literature: Medieval and
Renaissance Periods 3 credits
A detailed study of representative works and authors from *Beowulf* to the Restoration. Though the emphasis will be on an intensive study of major texts, some consideration will be given to minor writers and their times.

ENGL. 102
British Literature: The Restoration and Eighteenth Century 3 credits
Study in depth of the major works of such authors as Dryden, Pope, Swift, Boswell, and Johnson, among others. Due attention will be given to critical analysis, literary research, and historical, social, and political background.

ENGL. 103
British Literature: Romantic and Victorian Periods 3 credits
A study of major literary works of nineteenth-century England: poetry, novels, and non-fictional prose. The emphasis is threefold: critical analysis; literary history; social, intellectual and political background.

ENGL. 104
American Literature to 1865 3 credits
An in-depth study of a select group of major American authors from the Colonial Period to the Civil War. Included are Bradford, Franklin, Irving, and Poe. Consideration given to the historical and cultural milieu and development of major American themes and attitudes.

ENGL. 105
Twentieth Century British Literature 3 credits
Study of selected major British and Anglo-Irish poets, playwrights, and novelists of the present century. Such authors as Yeats, Auden, Osborne, Shaw, Pinter, Joyce, Woolf, and Graham Greene will be read.

ENGL. 106
American Literature, 1865-Present 3 credits
Study of a select group of major American authors from the Civil War to the present. Included are Twain, Crane, Fitzgerald, and Vonnegut. The historical and cultural milieu and the development of major American themes and attitudes.

ENGL. 112
Black Literature 3 credits
This is an introductory survey course in Afro-American literature featuring an in-depth examination of the works of major Black authors from the colonial American period to the present.

ENGL. 113
Logical and Rhetorical Analysis 3 credits
A study of the principles of logic and persuasion, an analysis of fallacies, the principles of structure in written and oral composition. Practice in briefs and abstracts with an emphasis on exactness and clearness. (GE Area III or IV)

ENGL. 114
Argumentation and Debate 3 credits
A study of the techniques of argumentation and persuasion. Major areas of concentration are in research, case construction, and analysis. (GE Area III or IV)

ENGL. 124
Creative Writing 3 credits
Theory and practice of imaginative writing, with a concentration on the short story. Opportunities will also be provided for those students whose primary interest is in another genre: poetry, one-act play, or essay. (GE Area III or IV)

ENGL. 125
Written Communication; Strategies for Teaching Writing 3 credits
Those elements of the communication process peculiar to developing writing skills with emphasis placed on writing as a process. Student is involved in laboratory activities: each class member experiences a "mini-teaching responsibility" by functioning as laboratory assistant for the University's writing center, by planning assignments, generating writing situations, and responding as an audience. (GE Area III)

ENGL. 127
Teaching Modern Grammars 3 credits
This course is designed to provide an understanding of the English language and its grammar, based upon recent linguistic analysis of the language, and to assist the future teacher in his understanding of transformational/generative grammar and its place in the curriculum. Techniques for teaching these new grammars, and laboratory teaching experience in the freshman writing clinic will be presented. Students seeking certification as secondary school English teachers should also be advised that the usual teacher of Engl. 127, as well as 125, Dr. Wm. Rakauskas, supervises student teachers for the department. (GE Area III)

ENGL. 131-132
Masterworks of Western Civilization 6 credits
Study of masterpieces of literature from the Hebrew Old Testament and classic Greek to the modern European illuminating the development of Western civilization.

The particular subject for each of the following courses (English 151-158) will vary from year to year, to allow flexibility, and to recognize changing student needs and interests. Course descriptions will be provided during pre-registration:

English 151-152. Special Studies in Literature: Major Author.
Possible topics—Shakespeare, Chaucer, Milton, Pope, Dickens, Joyce, Whitman, Dickinson, Twain, James, Faulkner, Flannery O'Connor, Gerard Manley Hopkins.

English 153-154. Special Studies in Literature: Genre.
Possible topics—The Myth of the Hero, Theories of Comedy, Satiric Literature, Tragedy.

English 155-156. Special Studies in Literature: Group or Period.
Possible topics—Theatre of the Absurd, Literature of the American Twenties, the Augustans, the Romantics, 17th Century Divines.

English 157-158. Special Studies in Literature: Theme or Topic.
Possible topics—Women in Literature, the Literature of War and Peace, the Literature of Revolution, Literature and the Grotesque.

ENGL. 160-61
History of the Theatre 6 credits
A study of the various ages of Western theatre; the method is concentration on individual playwrights, the historical circumstances in which they lived and worked, the traditions they inherited. (GE Area IV)

ENGL. 190
Harlem Renaissance 3 credits
A concentrated study of the most fruitful era in American literature of the 1920s, let alone Black literature, with particular references to the social, economic, and political life of the times.

EN/P. 189
The Fragmented World 3 credits
(See description under Interdisciplinary Courses.)

ENGL. 191-197
Guided Independent Study variable credit
A tutorial program open to Junior and Senior students. Content determined by mentor.

ENGL. 198-99
English Internships 3-6 credits
Majors in English and Communications are given the opportunity in Junior or Senior year to apply for internships in media-related positions. COMM. 198-99 is the course number for Communications internships.

See additional related course listings under Communications major.

FOREIGN LANGUAGES AND FINE ARTS

PROF. CIMINI, *Acting Chairman*

The program of the Foreign Language and Fine Arts Department is designed to enable the student to read, write, speak and comprehend one or more foreign languages; to think and express him/herself logically, precisely and critically in one or more foreign languages; to acquire skills in literary criticism by reading representative foreign authors; to gain insight into the evolution of the culture and civilization of foreign peoples as reflected in their literature and arts; to develop an aesthetic appreciation and a critical acumen through the study of the achievements of various peoples in the realm of fine arts and classical music.

The Bachelor of Arts program in Classical Languages gives the student a solid foundation in Latin and Greek to engender an appreciation of the liberal aspects of Classical Studies. Classics majors are encouraged to take their junior year at Loyola University in Rome.

A major in modern foreign languages requires the completion of 24 credits in one language beyond the 101-102 level. Modern language majors normally take at least 12 credits in a second language, either modern or classical, as their cognate. A double major may be pursued by taking 24 credits in one language beyond the 101-102 level, and by satisfying major requirements in another field. The placement of students at a particular foreign language level is the responsibility of the chairman. Modern language majors are advised to take the Modern Language Proficiency Test in their junior or senior year.

FRENCH

FRENCH 1 & 2
Elementary French 6 credits
Designed to impart a good basic foundation in comprehending, speaking, reading, and writing of the French language. Designed primarily for students with no or insufficient background in the French language. Meets four hours a week or equivalent.

FRENCH 23 & 24
Intermediate French 6 credits
Designed to give greater scope and depth to the student's knowledge of the grammar and style of the French language, with readings of original works selected from French literature. Meets four hours a week or equivalent. Prerequisites: French 1 & 2, or equivalent.

FRENCH 101 & 102
Advanced French Composition and Conversation 6 credits
An intensive course in French composition and conversation with emphasis on detailed study of advanced grammatical and stylistic usage of the French language. Meets three hours a week, or equivalent, and one hour weekly independent practice in the language laboratory. Prerequisites: French 23 & 24, or equivalent.

FRENCH 111 & 112
Survey of French Literature 6 credits
A review of French literature from the chanson de geste to the contemporary period. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: French 101 & 102, or equivalent.

FRENCH 113 & 114
Survey of French Culture and Civilization 6 credits
A review of the historical, philosophical, artistic, literary, and scientific development of the French people from the Roman occupation to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 131
Medieval and Renaissance French Studies 3 credits
Selected literary works from the eleventh century to the late Renaissance. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisite: French 101 & 102, or equivalent.

FRENCH 141
XVIIth Century French Studies 3 credits
Literary, philosophical, and social expression from 1610 to 1715. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 151
XVIIIth Century French Studies 3 credits
The Enlightenment from 1715 to 1789. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 161
XIXth Century French Novel 3 credits
The development of prose narration as reflected in the literary movements of the age. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 162
XIXth Century French Poetry 3 credits
The development of poetic forms from the romantic to the symbolist movement. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 171
XXth Century French Novel 3 credits
The development of prose narration from the Dreyfus case to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 173
XXth Century French Drama 3 credits
The development of dramatic forms from the Theatre Libre to the present. Meets three hours a week, or equivalent, besides a laboratory program based on class materials. Prerequisites: French 101 & 102, or equivalent.

FRENCH 181
Advanced French Stylistics and Phonetics 3 credits
Designed to strengthen the speaking and writing skills while emphasizing the production of speech sounds and their transcription by the International Phonetic Alphabet. Exercises in enunciation and phraseology, besides a refined usage of grammar and syntax. Meets four hours a week, or equivalent. Prerequisites: French 101 & 102, or equivalent.

FRENCH 191-197
Guided Independent Study Variable credit
A tutorial program open to junior and senior students only. Content determined by mentor. Prerequisites: French 101 & 102, or equivalent.

GERMAN

GERMAN 1 & 2
Elementary German 6 credits
A complete course in the fundamentals of the German Language. Emphasis on reading of graded texts, with written and oral and aural exercises. Designed primarily for students with no or insufficient background in the German language. Meets four hours a week, or equivalent. Prerequisite: None.

GERMAN 23 & 24
Intermediate German 6 credits
Reading from modern authors of moderate difficulty. Oral and written exercises. Systematic review of German grammar. Meets four hours a week, or equivalent. Prerequisite: German 1 & 2, or equivalent.

GERMAN 101 & 102
Advanced German Conversation and Composition 6 credits
Selected texts in prose and poetry. Advanced practice in conversation and composition. Survey of German grammar. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisite: German 23 & 24, or equivalent.

GERMAN 111 & 112
Survey of German Literature 6 credits
A survey of German literature from the eleventh century to the contemporary period, with special emphasis on the main intellectual currents as well as the social and political developments. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory. Prerequisites: German 101 & 102, or equivalent.

GERMAN 113 & 114
History of German Civilization 6 credits
Selected readings of representative essays by major philosophers, scientists, historians and related self-analysis by major writers, Discussions, oral and written reports. Meets three hours a week or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 131
German Lyric Poetry 3 credits
Readings will include representative poems from the medieval *Minnesang* up to contemporary lyric forms. Discussions will center on tex-

FOREIGN LANGUAGE CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Language	Intermediate or Advanced Language	3	3
COGNATE	Lang. 1-2 or 23-24	Second Modern or Classical Language	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Lang. 101-102	Advanced Composition and Conversation	3	3
COGNATE	Lang. 23-24	Second Modern or Classical Language	3	3
COGNATE	Lang. 184-Elec.	Introduction to Linguistics*—Elective	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Lang.	Advanced Language Elective	6	6
COGNATE	Elective	Elective	3	
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy or Religious Studies Elective		3
			15	18
		SENIOR		
MAJOR	Lang.	Advanced Language Elective	6	6
COGNATE	Elective	Elective	3	
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy or Religious Studies Elective		3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

*For modern language majors only.

For modern language majors seeking certification in secondary education, the departmental chairman and Director of Student Teaching should be consulted on a program.

In Area III, English 7 is recommended during first year.

In Area IV, Hist. 114, 115, 116, 119 or 161-62 are recommended for modern language majors.

For classical language majors, Art 101 is recommended as a third year communications elective.

tual analysis and poetic theory. Meets three times a week, or equivalent, plus a one-hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 141
Literature of the Middle Ages and the Baroque 3 credits
Reading of the great epics: the *Nibelungenlied, Tristan, Parzival;* plus selected works of the 16th and 17th century. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 151
The Age of Enlightenment 3 credits
A study of representative authors of the first half of the 18th century: Lessing, Herder, Klopstock. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 152
Goethe and his Contemporaries 3 credits
A study of the literature of the late 18th century: Goethe, Schiller, Hölderlin. Meets three times a week, or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 161
German Romanticism 3 credits
Readings in the novel, drama, and poetry of early 19th century authors, such as Kleist, E.T.A. Hoffmann and Novalis. Meets three hours a week or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 162
Poetic Realism 3 credits
A study of the works of late 19th century authors, such as Storm, Fontane, and Keller. Meets three times a week or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 171
German Literature up to 1945 3 credits
An in-depth study of such authors as Brecht, Mann, Kafka, and Rilke. Meets three hours a week, or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 172
Postwar German Literature 3 credits
Concentration on contemporary authors such as Frisch, Dürrenmatt, Grass and Böll, as well as representative authors from East Germany. Meets three hours a week, or equivalent, plus a one hour weekly independent practice in the language laboratory. Prerequisite: German 101 & 102, or equivalent.

GERMAN 191-197
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

SPANISH

SPANISH 1 & 2
Elementary Spanish 6 credits
Fundamentals of grammar, drill in pronunciation, conversation, easy readings and written exercises. Designed primarily for students with no or insufficient background in the Spanish language. Meets four hours a week, or equivalent. Prerequisite: None.

SPANISH 23 & 24
Intermediate Spanish 6 credits
Grammatical review, written and oral composition. Selected cultural readings of intermediate difficulty. Meets four hours a week, or equivalent. Prerequisites: Spanish 1 & 2, or equivalent.

SPANISH 101 & 102
Advanced Composition and Conversation 6 credits
A thorough study of Spanish grammar, composition, oral and written, with aim of developing ability to write clear and fluent Spanish. Practice in oral composition. Meets three hours a week or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 23 & 24, or equivalent.

SPANISH 111 & 112
Survey of Spanish Civilization 6 credits
A survey of the political, artistic, literary and scientific progress of Spain, with readings of each period. Meets three hours a week or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 113 & 114
Spanish-American Culture and Civilization 6 credits
The social, artistic, literary and political development of Spanish America, with special emphasis on its unifying features: Language, Religion and Historical background. Meets three hours a week or equivalent, and one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 115 & 116
History of Spanish Literature 6 credits
Study of Spanish literature from Cantar de Mio Cid to XX century, with emphasis on main literary currents in each century. Lectures in Spanish. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 131 & 132
The Golden Age 6 credits
The development of the novel, with the culmination of all forms in Cervantes; and of the drama, reaching its perfection in De Vega and Calderon. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 161 & 162
The Modern Spanish Novel 6 credits
The short story and the novel in Spain in the late 19th and early 20th centuries. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Lectures and discussions in Spanish. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 163 & 164
The Latin American Novel 6 credits
An examination of the esthetic, cultural and social aspects of prose fiction in Latin America over the past two hundred years. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 165 & 166
The Generation of 1898 6 credits
Thorough examination of the movement, its political, historical, and social background; Ganivet, Unamuno, Azorin, etc. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisites: Spanish 101 & 102, or equivalent.

SPANISH 191 & 192
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

ITALIAN

ITALIAN 1 & 2
Elementary Italian 6 credits
A course in Italian for beginners. Principles of Italian grammar, drill in pronunciation; conversation and easy readings.

ITALIAN 23 & 24
Intermediate Italian 6 credits
(Prerequisite: Italian 1 & 2, or equivalent) Selected modern readings of intermediate difficulty. Written and oral composition.

ITALIAN 101 & 102
Advanced Italian Composition and Conversation 3 credits
Intensive study of Italian grammar. Advanced practice in conversation and composition. Selected readings of Italian authors. Meets three hours a week, or equivalent, and a one hour weekly independent practice in the language laboratory. Prerequisite: Italian 23-24, or equivalent.

Professor Frank Cimini, Department of Foreign Languages

GREEK

GREEK 1 & 2
Elementary Greek 6 credits
An intensive course in the fundamentals of Classical Greek grammar.

GREEK 23 & 24
Intermediate Greek 6 credits
Review of fundamentals. Readings from Xenophon, Euripides and the New Testament.

GREEK 101
Homer 3 credits
Selected readings from the Iliad and the Odyssey. An appreciation of the diction, thought and beauty of Homer.

GREEK 102
Thucydides 3 credits
Evaluation of fifth century Athens and of Thucydides as philosopher and historian. Readings from the History of the Peloponnesian War.

GREEK 105
Plato 3 credits
Reading of the Apology. A philosophical, historical and literary analysis of Plato and Socrates. Supplementary reading in the Crito and Phaedo.

GREEK 106
Euripides 3 credits
Reading and analysis of the Medea with an evaluation of the art and thought of Euripides.

GREEK 107
Sophocles 3 credits
Evaluation of Sophocles as a poet, dramatist and thinker through a study of the Oedipus Tyrannus.

GREEK 108
Demosthenes 3 credits
An analysis of the De Corona as a model of rhetoric. Consideration of the rhetorical norms established by Aristotle.

GREEK 109-110
Readings in Greek Literature 3-6 credits
Selections from Greek writers to suit the student's special interest.

GREEK 191-197
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

LATIN

LATIN 1 & 2
Elementary Latin 6 credits
An intensive course in the fundamentals of Latin. Reading and composition.

LATIN 23 & 24
Intermediate Latin 6 credits
Review of fundamentals. Reading of selections from Caesar, Cicero and Virgil.

LATIN 101
Horace and Juvenal 3 credits
A study of Roman satire revealing the life, manners and thought of the times.

LATIN 103
Cicero and Lucretius 3 credits
Selections from the Tusculan Disputations and the De Rerum Natura illustrate contrasting developments in Roman thinking. The course includes a brief survey of ancient philosophy.

LATIN 104
Christian Latin Literature 3 credits
Selections from Christian Latin writers with concentration on the Confessions of St. Augustine.

LATIN 107
Livy and Virgil 3 credits
Selections from Livy I and XXI, and from Books VII-XII of Virgil's Aeneid.

LATIN 108
Horace and Catullus 3 credits
Lyric poetry illustrated by the Odes of Horace and selected poems of Catullus.

LATIN 109 (110)
Readings in Latin Literature 3-6 credits
Selections from Latin writers to suit the student's special interest.

LATIN 111 & 112
Medieval Latin 6 credits
Introduction to medieval Latin. Readings in medieval prose and poetry from the ninth to the fifteenth centuries.

LATIN 191-194
Guided Independent Study variable credit
A tutorial program open to junior and senior students only. Content determined by mentor.

ART APPRECIATION

ART 101 & 102
Appreciation of the Visual Arts 6 credits
The interpretation, appreciation and aesthetic norms of art, architecture and sculpture. Aegean civilization. Greece and Rome. Early Christian and Byzantine art. Romanesque and Gothic classes will be discussed during the first semester. The spring term includes the Renaissance painting, sculpture and architecture; baroque period painting in the Low Countries and England. French art from classicism to post-impressionism. Modern trends. (GE IV)

ART 103 & 104
Music Appreciation 6 credits
Introduction to elements and forms. Analysis and interpretation of respected masterpieces to encourage perceptive listening habits. The first semester will preview music development to Bach, while the second semester will treat compositions from Bach to the present including America. No previous formal training is required. (GE AREA IV)

ART 105
From Bach to Rock 3 credits
A listening course exposing the student to the lives and music of composers starting with J.S. Bach and moving chronologically to the present. Special attention given to Mozart and Beethoven. (GE AREA IV)

ART 106
Opera: The Poetic Musical Drama
How can this art form be so convincing? How can it bring about that "suspension of disbelief" which is the essence of the theater experience? The course aims to answer these questions through the intelligent enjoyment of significant operas. Special attention given to Mozart, Verdi, Wagner and to Mascagni's and Leoncavallo's inseparable works *Cavalleria Rusticana* and *Pagliacci* better known as "the ham and eggs" of opera. (GE AREA IV)

ART 111 & 112
History of American Art 6 credits
A survey of architecture, sculpture, and painting in America from the 17th century to the present day. (GE AREA IV)

ART 119-120
Guided Independent Study in Art and Music 3 credits
Courses are intended to meet specific needs. Content and methodology vary.

ART 121
Introduction to Printmaking 3 credits
The class will analyze, with the aid of visual materials, the field of printmaking on the historical as well as the technical level. Relief and silkscreen printing will be done employing learned techniques. The mixing of printing processes will be explored so that a range of expressions can be gained. Fee: $20.00. (GE III)

ART 122
Multimedia 3 credits
Investigates historical expressions of artistic activity through various media (mosaic, stained glass, batik.) with the aid of visual materials. Examination of technical approach. Planning, layout and design. Use of tools, construction. Each student completes projects in each medium studied. Fee: $20.00. (GE AREA III)

HISTORY

DR. DeMICHELE, *Chairman*

The department aims: 1. to train the student in solid historical methodology; 2. to present history as the study of interdependent human activities and concrete events which have social significance; 3. to engender an intelligent and critically sympathetic understanding of various civilizations and cultures.

The department offers a special program that enables qualified students to obtain both their Bachelor and Master's degree within four calendar years. The program utilizes Intersession or summer sessions and the use of four graduate history courses as part of the undergraduate program. The chairman of the department should be contacted for details of the program.

See the Pre-Law program on page 44 for details of the department's success in this area.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	History 3-4	Europe: 1500 to Present	3	3
MAJOR	History 1-2	United States History	3	3
COGNATE	Elective	Inquiry Sequence or Language	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	History	Elective	3	3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	History	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA II	Social/Behavior	Electives	6	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Elective	Elective		3
			18	15
		SENIOR		
MAJOR	History	Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE FREE	Elective	Elective		3
			15	15
			TOTAL:	127 credits

HIST. 1 & 2
History of the United States 6 credits
The United States from the time of its European beginnings to the present with special emphasis on the history of Pennsylvania; colonial origins to the end of the Civil War; reconstruction to the present.

HIST. 3 & 4
Europe, 1500 to the Present 6 credits
European history with concentration upon the political aspects of European development. The rise of national monarchies; political, social, economic, and intellectual developments; industrialism, the new nationalism and liberalism.

HIST. 101 & 102
Ancient History 6 credits
The rise of civilization in Mesopotamia, Egypt, the Indus Valley and the Mediterranean world; growth of civilization in China and India; the rise of Greece and Hellenism; Rome from Republic to Empire; the barbarians and the end of ancient culture; the origins of Christianity; pre-Colombian civilization in the New World.

H/PS 103
Saving America's Past 3 credits
Introduction to problems of the changing urban-suburban environment. Using Lackawanna County as a model study region, the issue of urban planning, architectural recycling, historic preservation and citizen awareness will be explored. Walking tours of Scranton and surrounding communities.

HIST. 104
Artifact in American History 3 credits
Introduction to the sources of American decorative and folk arts and interior architecture from the Boston Tea Party to the Philadelphia Centennial Exhibition. The arts themselves and evolution and development of American tastes will be examined as primary source material for the cultural historian, reflective of contemporaneous socio-political trends. Visits to public and private collections in the region.

HIST. 105
History as Biography 3 credits
An exploration of the nature of biography and its relationship to the study of the past. Biographies of several major figures from the modern era will be read and studied to exemplify different biographical techniques and their utility as means of historical inquiry.

HIST. 110 & 111
Medieval History 6 credits
The civilization of medieval Christendom from the fall of the Roman Empire to the beginning of the fourteenth century; its religious, social, economic, cultural and political aspects; the relationship between Church and society, belief and life style, ideal and reality; the interaction between Western Christendom, Byzantium and Islam.

HIST. 112 & 113
Renaissance and Reformation 6 credits
Europe in transition from medieval to modern (from the beginning of the fourteenth century to the middle of the seventeenth century); the decline of medieval civilization; the Renaissance, the shattering of Christian unity in the Protestant Reformation; the Catholic response, the age of exploration; the struggle for empire.

HIST. 114
French Revolution to 1815 3 credits
Historical antecedents; the philosophies; the republicanism and the fall of the monarchy; Reign of Terror; the Directory; Napoleon; internal achievements; significance of the Spanish and Russian Campaigns; and War of Liberation.

HIST. 115
Europe, 1815-1875 3 credits
The congress of Vienna and the European restoration; Industrialism, Liberalism, Socialism, and Nationalism; the revolutions of the 1840's; the unification of Italy and the German Empire; Russia and the Lesser States of Europe; the Third French Republic.

HIST. 116
Europe, 1875-1914 3 credits
The domestic problems confronting France, Italy, German, Central and Eastern Europe, and Russia. Competition for colonies and markets; the growth of alliances; World War I and the Treaty of Versailles. The Russian Revolution and Communism.

HIST. 117 & 118
Europe in Its World Setting Since 1914 6 credits
World War I; Treaty of Versailles; Russia becomes the U.S.S.R.; the European struggle for security; Italian Fascism; Rise of Nazi Germany; Asia between the two wars; World War II; loss of colonial empires in Africa and Asia; development of the Cold War; Marshall Plan and NATO.

HIST. 119
Special Topics in European History 3-6 credits
The particular topic or topics will vary from year to year depending on the instructor and changing student needs. Exact course description will be provided at pre-registration. Possible topics include Nazism, World War I, "Ism" in Modern Europe, etc.

HIST. 120 & 121
American Diplomatic History 6 credits
A study of American diplomatic history and principles. The Revolution. Early American policies on isolation and expansion. The War of 1812. The Monroe Doctrine. Manifest Destiny. The Civil War. American imperialism and the Spanish-American War. Latin American diplomacy in the twentieth century. World War I. Attempts to preclude further war. World War II. Cold War. Contemporary problems.

H/PS 122 & 123 6 credits
American Constitutional and Legal History
(Recommended for Background: History 1 & 2) The juridicial concepts of the colonial and revolutionary periods; backgrounds of the Federal Convention; the nature of the Constitution, its interpretation by Marshall and Taney. The constitutional problems occasioned by the Civil War; the new amendments; the role of the States in a Federalist system. Key cases will be analyzed in detail and set in their proper historical perspective.

H/PS 124 & 125
American Political and Social Thought 6 credits
(Recommended for Background: History 1 & 2) An inquiry into the major philosophies which helped shape our institutions. Puritan concepts; views of the independents; pre-Revolutionary society and thought and the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications or the slavery question. Triumph of the nationalist view.

HIST. 128
Special Topics in American History 3-6 credits
An analysis of selected topics in American history from the colonial era to the present. The particular topic or topics will vary from year to year depending on the instructor and changing student needs.

HIST. 130 & 131
Twentieth Century United States 6 credits
(Prerequisite: History 2) An intensive study of American Development from 1900 to the present. Stress will be placed on the Roosevelt Era and its Progressivism. Wilson's New Freedon; diplomacy of the First World War; the return to "normalcy"; the Great Depression and the New Deal; Roosevelt and world politics; origins and consequences of World War II. The Truman Era. Contemporary problems facing the United States.

H/So 134
Introduction to Archaeology 3 credits
An introduction to the study of archaeology from the anthropological and historical perspectives. The problems of survey and site recognition, excavation planning, record keeping, treatment of artifacts, and interpretation will be explored. Problems of above-ground archaeology examined. Site visitations included.

HIST. 135
European History, 1648-1789 3 credits
(Recommended for Background: History 3) A study of the major political, social, economic and intellectual movements in Europe from the rise of royal absolutism until the outbreak of the French Revolution.

HIST. 136-137
American Ideas and Culture 6 credits
(Recommended for Background: History 1 & 2) History of American art, architecture, literature, and thought. Colonial Developments. The American Enlightenment. The emergence of a national culture. Romanticism. Post-Civil War Realism in American art and literature. The intellectual response to the industrial order. The American mind in the 1920's. The intellectual and cultural response to the depression. Post-World War II developments.

HIST. 140
England, 1485 to 1714 3 credits
The end of the Wars of the Roses; Tudor Absolutism, Henry VIII and Reformation; Elizabeth I; Renaissance and Elizabethan Music and Literature; The Stuarts; Colonialism; Commonwealth; Restoration; the Revolution of 1688; Reign of Anne.

HIST. 141
England, 1714 to Present 3 credits
Parliamentary rule: Cabinet government; Political parties; Industrial Revolution, 19th Century reforms; building of a British Empire; World War I; problems of readjustment; World War II; Britain and the world today.

HIST. 142
English Constitutional and Legal History to 1485 3 credits
Anglo-Saxon basis; fusion of Anglo-Saxon and Norman political institutions; Angevin innovations; Magna Carta; concept of representation; beginnings of the Common Law; jury system; emergence of Parliament.

HIST. 143
English Constitutional and Legal History, 1485 to Present 3 credits
Tudor absolutism, struggle between royal prerogative and Parliament; rise of House of Commons; Parliamentary supremacy after 1688; development of Cabinet government; democratic reforms; Parliamentary Bill of 1911; extension of administrative law.

H/PS 148
War and Modern Society 3 credits
(See description under Political Science.)

HIST. 150
Imperial Russia 3 credits
From the crystallization of political forms in the 9th century through the Kievan State, Mongolian Invasion, Rise of Muscovy to the Eurasian Empire from the 17th to the end of the 19th century.

HIST. 151
Russian Revolution and Aftermath 3 credits
A study of the development of radical thought in 19th and 20th century Russia. Analysis of various factors and forces at work in revolutionary Russia. Lenin, War Communism, NEP, Stalin.

H/PS 152
Soviet Foreign Policy 3 credits
(See description under Political Science.)

HIST. 161 & 162
Latin American History 6 credits
Pre-Colombian America; the Spanish and Portuguese colonial area, developments to the early nineteenth century. The Latin American Republics, Castroism, The Alliance for Progress, with special stress on inter-American problems.

HIST. 170
Colonial America, 1607-1763 3 credits
The European background of the Age of Discovery; the founding of the British-American colonies; their political, economic and cultural development; British colonial policy and administration; the development of an American civilization.

HIST. 171
American Revolution, 1763-1789 3 credits
Background to the War for Independence; British imperial policy; the development of economic and ideological conflicts; the military contest; British ministerial policy and the parliamentary opposition; the Confederation; the formation of the Constitution.

HIST. 173
The Early National Period of American History, 1789-1837 3 credits
Beginning of the New Government; Politics and diplomacy in the Federalist Era; Jeffersonian Democracy; the War of 1812; Nationalism and Sectionalism; Marshall and the rise of the Supreme Court; the Jacksonian Era.

HIST. 174
The Middle Period of American History, 1837-1877 3 credits
Slavery; the Abolitionist Crusade; American Expansion in the 1840's; the Mexican War; Politics and diplomacy in the 1850's; Economic, social, and intellectual developments; the coming of the Civil War; the Civil War; Reconstruction.

H/PS 176
World Politics 3 credits
(See description under Political Science.)

HIST. 177
History of United States Immigration 3 credits
A study of immigration to the United States with emphasis on the period from the Revolution to the restrictive legislation of the twentieth century. Motives and characteristics of immigration. Experiences of newcomers.

HIST. 178
A History of American Assimilation 3 credits
The history of assimilation (or adjustment) of immigrants to American life. Nativism from pre-Civil War days to the 1920's. The "Old Immigration" and the "New Immigration" considered in the social, political, economic, and religious contexts of their eras. Special problems of the second generation from the 1850's to the 1960's.

HIST. 185
Total War 3 credits
Examination of the tactics, strategy, and global significance of World War II. The logistics and scope of the conflict. Importance of propaganda, patriotism and the people. Film-seminar approach.

H/PS 188
Ethnic & Racial Minorities in Northeastern Pennsylvania 3 credits
Film-seminar approach to study of various ethnic groupings in Northeastern Pennsylvania. Seeks to achieve better understanding of the immigrant's problems and his accomplishments through use of documentary and feature films.

HUMAN SERVICES

DR. SZUHAY, *Chairman*
DR. DELLARIO, *Program Director*

The Human Services curriculum is designed to develop in students the values, knowledge and skills necessary to work with people in a variety of helping relationships. The sequence of courses in the Human Services curriculum includes significant integration with the fields of psychology and sociology. As such, the curriculum is interdisciplinary and allows the student maximum freedom in exploring related academic fields. The program is geared to students who have high social service interests as well as general scientific interest and aptitudes in the social and behavioral sciences. The curriculum is career oriented; this aids the graduate in securing entry-level positions with public and private agencies in programs concerned with preventive and remedial health, welfare and rehabilitation services. The curriculum also provides a solid foundation for future graduate level education in the helping professions, particularly in rehabilitation counseling, school counseling, and social work. The Human Services major is administered by the Department of Human Resources, which also administers the Graduate School Master's Degree program in Rehabilitation Counseling.

	Dept. and No.	Descriptive Course Title	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	HSrv. 11	Foundations of Human Services	3	
MAJOR	HSrv. 12	Phil. and Organ. of Human Services		3
MAJOR	Soc. 22	Social Problems		3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
COGNATE	Soc. 21	Principles of Sociology	3	
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20-T/RS	Intro. to Phil.—Theology Elect.	3	3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	HSrv. 13 or 14	Elective		3
MAJOR	Psych. 26	Theories of Personality	3	
COGNATE	Electives	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Electives	6	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS-Phil. 110	Theology Elect.—Ethics	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19	19
		JUNIOR		
MAJOR	HSrv. 101-102	Case Management-Counseling Theory	3	3
MAJOR	Psych. 144	Psychology of Development		3
COGNATE	Electives	Electives	6	3
GE AREA IV	Humanities	Electives	6	3
GE AREA V	Phil.-T/RS	Elective		3
			15	15
		SENIOR		
MAJOR	HSrv. 103	Group Counseling and Dynamics	3	
MAJOR	HSrv.	Elective		3
COGNATE	Electives	Electives	3	6
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil.-T/RS	Elective	3	
GE FREE	Elective	Electives	3	3
			15	12

TOTAL: 127 credits

There are 18 unspecified credits in the Cognate and 6 credits in the Free Area; students should consult their departmental advisor and/or the Counseling Center for meaningful utilization of these 30 credits.

To be eligible for the 12 month Master's Degree Program in Rehabilitation Counseling, the student must opt for Psych. 24 (or Soc. 122) as Area I electives. Also, in the MA program, HSrv. 199 must be taken during or before the Intersession of Senior Year.

HSRV. 11
Foundations of Human Services 3 credits
Designed to increase the student's awareness of his needs, his impact on other persons, and the demands of his environment. The relationship between the professional helper and his clients as the foundation of all human service efforts is emphasized. Group methods will be employed. For majors and transfers only.

HSRV. 12
Philosophy and Organization of Human Services 3 credits
Designed to help students to be more responsive to individual, group, community, and societal needs and to understand the organization and structure of human services. Concepts of organizing, integrating, and implementing a network of different human services are discussed as are services in relation to broader social, economic, and cultural issues and values.

HSRV. 13
Professional Contributions in Human Services 3 credits
Exploration of the numerous professional workers in the field of human services with emphasis on their professional specialties and roles in helping people. The student is expected to participate in individual and group counseling activities emphasizing self understanding and analysis and career planning. Prerequisite: Approval of Instructor for non-majors.

HSRV. 14
Philosophy and Organization of Human Services II 3 credits
Focuses on the philosophic and programmatic aspects of selected human service programs and systems generally encountered in human services work. Emphasis is given to those programs that are national in scope or federally mandated but implemented at the state and local levels. An examination of the characteristics of the clients or recipients of these programs or systems is included. Prerequisite: HSRV 12.

HSRV. 101
Case Management and Interviewing 3 credits
The role of the helper as a case manager or coordinator of services is examined with particular emphasis being placed on development of treatment plans. Initial interviewing skills and techniques are discussed. Case studies and role playing activities are utilized. Prerequisite: Approval of Program Director for non-majors.

HSRV. 102
Counseling Theories and Techniques 3 credits
The role of the helper as an individual counselor or caseworker is examined. Theories and techniques as well as problems in individual counseling are explored. Case studies and role playing activities are utilized. Prerequisite: Approval of Program Director for non-majors.

HSRV. 103
Group Counseling and Dynamics 3 credits
The role of the helper as a group intervention specialist is examined. Theories and techniques of group counseling, group process, and group dynamics are explored and practiced in controlled settings. Role playing and structured group experiences are utilized. Prerequisite: Approval of Program Director for non-majors.

HSRV. 111
Introduction to Recreational Therapy 3 credits
Designed to develop an understanding of purpose, organization, administration and delivery of recreational therapy services for handicapped persons in a community setting and/or treatment center. Identification of handicapping conditions encountered by the recreational therapist and appropriate recreational therapy strategies are presented.

HSRV. 191
Independent Study in Human Services 3 credits
Independent study by the student into some aspect, area, or problem in the field of human services. Approval of mentor is necessary. Seniors only.

HSRV. 199
Internship in Human Services 3-6 credits
Supervised practical experience in a community agency providing human services. In selected cases a student may receive credit for part-time paid work experience. In either case, approval of mentor is necessary. May be taken during Intersession or Spring of Junior or Senior years. Applicants for Five Year Master's Program must take HSRV. 199 during or before Intersession of Senior year. Approval of Program Director for non-majors.

LAW ENFORCEMENT

PROF. RIELLY, *Chairman*

The BS Degree program in Law Enforcement has the following objectives: 1. to prepare students for careers in law enforcement at the local, state or federal levels (FBI, Departments of Defense, Treasury, Justice); 2. to prepare students for careers in the field of correction and rehabilitation: parole, prisons, juvenile delinquency, etc.; 3. to provide students with academic preparation for advanced study in law, criminology, public administration and related fields; 4. to allow students in other disciplines the opportunity to broaden their career preparation by taking courses in the law enforcement field as a cognate module.

An Advisory Board of Community leaders working in the field of law enforcement and criminal justice has been established to work with University officials and faculty in the areas of curriculum and internships.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Soc. 21—LE 20	Principles of Sociology—Intro. to Law Enforcement	3	3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	S/LE 123- LE 112	Law and Society—Research Methods	3	3
MAJOR	S/LE 103-113	Criminology—Juvenile Delinquency	3	3
COGNATE	Pol. Sci. 127	American Intergovernmental Relations		3
COGNATE	Psych. 25	Human Behavior	3	
GE AREA III	Elective	Elective	3	
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	LE Elec.	Law Enforcement Electives	3	3
COGNATE	Pol. Sci. Elec.	Political Science Electives	3	3
COGNATE	Soc. Sci. Elec.	Social Science Electives	3	3
GE AREA I	Bus. 1-2*	Accounting I-II	3	3
GE AREA I	Elective	Elective	3	
GE AREA IV	Humanities	Elective	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			18	15
		SENIOR		
MAJOR	LE Elec.	Law Enforcement Electives	3	3
MAJOR	LE 198/99-Elec.	Practicum/Independent Study-Elective	3	3
COGNATE	Soc. Sci. Elec.	Social Science Elective		3
GE AREA IV	Humanities	Elective	3	
GE AREA V	T/RS-Phil.	Philosophy and/or Religious Studies	3	3
GE FREE	Electives	Electives	3	3
			15	15

Asterisk (*) indicates departmental recommendation.

TOTAL: 127 credits

LE. 20
Introduction to Law Enforcement 3 credits
Philosophy and history of law enforcement in a democratic society in accordance with the Constitution; agencies of law enforcement; role and place of law enforcement in the total justice process.

S/LE. 103
Criminology 3 credits
Crime as a form of deviant behavior; nature and extent of crime; past and present theories; evaluation of prevention, control and treatment programs.

LE. 112
Criminological Research 3 credits
Survey of methods and techniques for achieving interpretable results in research in the criminal justice field; research design; data collection.

S/LE. 113
Juvenile Delinquency 3 credits
Nature and extent of delinquency: competing explanatory models and theories; evaluation of prevention, control, and treatment programs.

LE. 114
Social Groups and Gangs 3 credits
The social structure and culture of the public life of youth in American society, its effects on youth development and on their relationship to various social institutions and organizations in society.

S/LE. 115
Organized Crime Patterns 3 credits
Historical survey of organized crime in America; areas of influence; remedial practices and control.

S/LE. 123
Law and Society 3 credits
The nature and function of law; meaning of jurisprudence; private law; civil procedures; administrative law and practices; the operation of law and the system of criminal justice.

LE. 124
Principles of Criminal Investigation and Identification 3 credits
Course designed to teach investigators in-depth techniques in the handling and analysis of physical evidence; interviewing and interrogation; the preservation and admission of evidence in criminal cases.

LE. 125
Criminal Justice Process 3 credits
The development and structure of the criminal justice system, emphasizing its effects on offenders and on society, and examining attempts to modify it.

LE. 126
Criminal Law 3 credits
The legal definition of crime and defenses; purpose and functions of substantive criminal law; historical foundations; the limits of the criminal law.

LE. 128
Penology: The American Correctional System 3 credits
Analysis and evaluation of contemporary correctional systems; theories of punishment; discussion of recent research concerning the correctional institution and the various field services; the history of corrections in Pennsylvania.

LE. 129
Administrative Concepts/Theory in Law Enforcement 3 credits
Basic principles and practices of administration and their application to law enforcement. Relationship of theoretical administrative concepts and practical police problems.

LE. 132
Administration of Criminal Justice 3 credits
Problems in the administration of criminal justice, including law enforcement. Special attention will be paid to court administration.

C/LE. 151
Forensic Chemistry 3 credits
A study of the rules of evidence and the position of the expert and scientific witness in law, followed by a review of the uses of scientific, and particularly chemical, evidence in various phases of the investigation and trial of criminal actions. No prerequisite.

LE. 191-192
Independent Study in Law Enforcement 3 credits
Directed projects and surveys in criminal justice, law enforcement, and corrections designed to give the student academic flexibility. Prerequisite: consent of the Chairman and the instructor directing the study.

LE. 198
Field Practicum Experience 3 credits
Supervised field work in an approved criminal justice setting taken preferably in junior and senior year. Designed to provide the student with an opportunity to apply academic training in practical situations. Prerequisite: consent of campus Internship Supervisor.

LE. 199
Field Methods in Law Enforcement 3 credits
Critical examination of issues and practices for field study in law enforcement; introduction to analytic techniques, data processing resources, and preparation of research reports.

MATHEMATICS

PROF. BARTLEY, *Chairman*

Besides offering a classical undergraduate degree in mathematics, mathematics majors can take major and cognate courses in some of the fastest growing areas related to mathematics. These include courses in statistics, actuarial mathematics, and computer science. The usual cognates for mathematics majors are computer science and the natural sciences. With the permission of the department chairman, other cognates may be chosen.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Math. 14-21	Analysis I-II	4	4
COGNATE	CMPSC 20-25	Introduction to Computer Science	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS 6	Belief and Unbelief		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			17	17
		SOPHOMORE		
MAJOR	Math. 22-101	Analysis III—Differential Equations	4	4
COGNATE	Phys. 11-12	Elements of Physics I-II	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			18	18
		JUNIOR		
MAJOR	Math. 108-111	Modern and Linear Algebra	3	3
MAJOR	Math.	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics		3
GE FREE	Elective	Elective		3
			15	18
		SENIOR		
MAJOR	Math.	Electives	6	3
COGNATE	Electives	Electives	3	6
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	15

TOTAL: 133 credits

For GE Area III elective, the department recommends Engl. 2 (Oral Commun.) or Engl. 7 (Writing Center), except for those students who are notified that they are already qualified.

MATH. 1 & 2
Math Discovery 6 credits
Study of fundamental ideas of the science of mathematics. Applications of mathematics in social and management sciences used to furnish foundation for an appreciation of the influence of mathematics in our society.

MATH 3
Quantitative Methods I 3 credits
Finite Mathematics including theory of sets and deductive logic; analytic geometry; algebraic and transcendental functions; mathematics of finance.

MATH. 4
Quantitative Methods II 3 credits
Matrix methods and linear algebra including linear programming; differential and integral calculus; probability. Mathematics in solution of business problems.

MATH. 13
Pre-Calculus Mathematics 4 credits
An intensified course covering the topics of algebra and trigonometry.

MATH. 14
Analysis I 4 credits
The beginning of a twelve credit sequence covering the topics of analysis.

MATH. 21 & 22
Analysis II & III 8 credits
(Prerequisite: Mathematics 14, or equivalent) An integrated course covering the topics of calculus using modern methods.

MATH. 42
History of Math 3 credits
Important mathematical discoveries in their historical context; the works of some prominent mathematicians and the practical significance of their accomplishments.

MATH. 44
Special Topics 3 credits
Study of the computational aspects of statistics: hypothesis testing, linear and quadratic regression, correlation and analysis of variance.

MATH. 46
Theory of Games 3 credits
Study of the basics of game theory concentrating on its most elementary aspects. Attention paid to two-person zero-sum (fair) games.

MATH. 101
Differential Equations 4 credits
(Prerequisite: Math 21) Treatment of ordinary differential equations with applications.

MATH. 102
Probability Theory 3 credits
Basic concepts of probability theory, random variables and their distribution functions; limit theorems and Markov chains.

MATH. 103
Advanced Differential Equations 3 credits
(Prerequisite: Math. 101) The treatment of special differential equations and partial differential equations and their applications.

MATH. 104
Statistics 3 credits
(Prerequisite: Math. 4 or Math. 14) Measure of central tendency measure of dispersion, continuous random variables, expected value, moments, confidence intervals, hypothesis testing, regression and correlation.

MATH. 105
Geometry 3 credits
Euclidean and projective geometry. Transformations and Invariants.

MATH. 106 & 107
Advanced Analysis 6 credits
A one-year course for those who have completed the elementary calculus sequence. Topics include: Topology or Reals, Functions of Real Variable(s), Riemann-Stieltjes Integral, Sequences and Series, Lebesgue Theory.

MATH. 108
Modern Algebra 3 credits
(Prerequisite: Math 22 or permission of department head) Fundamental ideas and properties of groups, rings, fields, polynomials over a field.

MATH. 111
Linear Algebra 3 credits
(Prerequisite: Math 22) Vectorspaces, matrices, determinants, linear transformations, eigenvalues and eigenvectors, inner products and orthogonality.

MATH. 113 & 114
Mathematics Seminar variable credit
Designed to allow the student of demonstrated ability to cover advanced topics.

MATH. 115
Thesis variable credit
(Prerequisite: 24 credits in mathematics) A student's results of the investigation of a specific mathematical topic.

MATH. 120
Topology 3 credits
(Prerequisite: Math 22) An introduction to point-set topology. Connectedness, compactness, separation axioms, and metric spaces.

MATH. 121
Complex Variables 3 credits
(Prerequisite: Math. 22) The theory of complex variables: The calculus of functions of complex variables; Transformations; conformal mappings; residues and poles.

MATH. 130
Actuarial Mathematics 3 credits
(Prerequisite: Math 4 or 14) Theory of Interest, Measure, Accumulation, and Discount, Present and Future Value, Annuities, Perpetuities, Amortizations, Sinking Funds, Yield Rates.

MILITARY SCIENCE

LT. COL. GRUBBS, *Chairman*

The primary objective of the ROTC program is to develop leadership capabilities and to train future officers for both the active and reserve components of the United States Army.

Men and women who are between the ages of 17 and 24, U.S. citizens, and physically qualified, may enter the Basic Course. Entrance into M.S. 1-2 and M.S. 21-22 is voluntary and applicable to the Free Area of the General Education requirement.

Enrollment in the Advanced Course (M.S. 101) is highly selective. Students must pass a medical examination, a Cadet Evaluation Battery, a scholastic aptitude test (SAT or ACT), maintain a "C" average in their first two years of undergraduate work, and must be recommended by a board of faculty and Military Science officers. Advanced cadets attend a six-week ROTC summer camp at the end of their Junior year. Upon completion of the Advanced Course and upon graduation from the University, the cadet is offered a Regular Army or Reserve Commission. Commissions are offered in 17 branches of the Army based on the student's choice, educational background, and the needs of the service.

Advanced Course students receive $100 per month while in school and approximately $317 per month plus travel expenses while at Summer Camp. The Army Scholarship Program offers financial assistance to outstanding young men in the two- or four-year ROTC program. Each Scholarship provides for free tuition, textbooks and laboratory fees in addition to paying a subsistence allowance of $100 per month for 10 months each year the Scholarship is in effect. Cadets selected by the President of the University and the Professor of Military Science may apply for the one-, two- or three-year scholarship program.

Sophomores, who did not elect the Basic Course, may apply to the Professor of Military Science, not later than 31 March, for admission to the Two-Year ROTC Program. Students with prior enlisted service (veterans) are eligible to enroll in the ROTC program.

Freshmen and sophomores may satisfy their Physical Education credit hour requirement with satisfactory participation in the Royal Rifles drill team, Rifle team or the Commandos.

M.S. 1 & 2
Military Science I 2 credits
The Evolution of the United States Defense Establishment: The growth of the Establishment from pre-Revolutionary days to the present, noting such aspects of American thought as militarism, pacifism, and the fear of standing armies.

M.S. 21-22
Military Science II 4 credits
(Prerequisite: M.S. 1 & 2, or the equivalent) The Art of War: Principles of tactics and great commanders. Survey of the major developments in warfare and trace the influence of science and inventions on military tactics.

M.S. 101
Military Science III: Military Leadership and Management 3 credits
(Prerequisite: M.S. 21-22, or equivalent) Analysis of the role of the leader in setting organizational goals and standards; motivating group and individual performance, problems and complications of the exercise of authority, and senior-subordinate relationships. The managerial functions and techniques involved in decision making, psychology of leadership, delegation of authority and responsibility, span of control, and planning and coordinating. (This course is part of the General Education Social and Behavioral Sciences Area)

M.S. 102
Military Science III: Elective 3 credits
Military Science elective, or elective from other departments approved by the staff.

M.S. 121
Military Science IV 3 credits
The Army Officer in Contemporary American Society. This course will treat the role of the Army Office in America today. The course will examine such issues as the responsibilities and duties of the officer to the Army and to society, military justice vis-a-vis civil justice, and the traditional laws of warfare.

M.S. 122
Military Science IV 3 credits
Military Science Elective, or elective from other departments as approved by the staff.

NOTE: M.S. credits are not substituted as electives in the degree program except as specifically indicated above; however, they are included in the student's QPI.

PHILOSOPHY

DR. McGINLEY, *Chairman*

The basic objectives of the Philosophy Department may be stated as follows:

1) To inspire the student to come to grips with the basic philosophical problems implicit in his experience of the self, others and the universe, together with the question of their relations to ultimate transcendence (God and immortality);

2) To lead him to develop habits of clear, critical thinking within the framework of both an adequate philosophical methodology and accepted norms of scholarship;

3) To introduce him to reading critically the great philosophers, past and present;

4) Finally, through this entire process, to help him to formulate for himself a satisfactory philosophy of life or world-view. Hopefully, such a formulation will ground both his own search for fulfillments as a free person and his meaningful contribution to the world community. In this fashion the Department exercises the specifically illuminating and unifying functions of philosophy as set forth in the basic objective of liberal education adopted by this University.

For the AB degree in Philosophy, the major must take 24 upper division credits in Philosophy in addition to the six credits required of all students. These 24 credits must be distributed as follows: logic (3); history of philosophy (6); contemporary philosophy (6); thematic or problem-centered courses (6); free (3).

Classified as history of philosophy: Phil. 27, 106, 108, 113, 114, 118, 121, 122, 123, 125, 142, 143, 149.
Classified as contemporary: Phil. 109, 117, 119, 123, 128, 129, 132, 133, 135, 137, 147, 148.
Classified as thematic or problem-centered: Phil. 27, 104, 105, 106, 107, 108, 109, 112, 119, 124, 125, 128, 129, 130, 132, 133, 135, 137, 138, 140, 148.

PHIL. 20
Introduction to Philosophy 3 credits
The purpose of this course is to awaken the beginning student to the basic questions and answers available in philosophy. Contemporary methods are used to understand both current and classical philosophical literature. While important professional texts are used, this course is kept flexible enough to allow the individual professor to develop his own approach to philosophical problems.

PHIL. 27
Dialectical Logic 3 credits
In a survey fashion this course will: a) examine generically the relationship between logic and philosophy; and, b) examine the meaning which dialectical logic has had in the history of philosophy. This survey will be followed by an intensive training in the later Platonic dialogues. *Sophist, Statesman,* and *Parmenides* are the texts.

PHIL. 28
Logic: The Art of Communication 3 credits
This course will center on a study of the principles of critical thinking, fallacies, degrees of certitude, syllogistic reasoning, language and thought. The practical aspect of logic as it applies to life will be stressed rather than the formal system of logic.

PHIL. 104
Epistemology 3 credits
An historical and analytical examination of the problem of knowledge within the context of the problem of truth. Areas of investigation are authentic and unauthentic thinking and verbalization; the relationship between thought and language; the relationship between thought and experiencing; the critical status of the fundamental positions on the problem of ultimate truth.

PHIL. 105
Philosophy of Man 3 credits
This course will deal with the basic questions that confront man. This will involve an analysis of the social situation, a discussion of the implications of this situation for the person as he relates to his environment, and a search for the meaning of the 'whole person'.

PHIL. 106
Philosophy of Education 3 credits
Representative modern systematic philosophies of education with a critical analysis of the answers that each system provides to the important questions concerning the nature of knowledge, of value, of man and of society.

PHIL. 107
Philosophy of Law 3 credits
A study of the various justifications of law and their implications. Special consideration will be given to the problems of civil disobedience and the force of law in private institutions.

PHILOSOPHY CONCENTRATION

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Phil. 20-110	Introduction—Ethics	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA III	Communications	Foreign Language*	3	3
GE AREA III	Communications	Elective		3
GE AREA IV	Humanities	Elective		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			13	16
		SOPHOMORE		
MAJOR	Phil. 28—Elec.	Logic—Thematic Elective	3	3
MAJOR	Phil. Elec.	History of Philosophy Elective		3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Social/Behavior	Electives	6	6
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Philosophy	Thematic and Contemporary Electives	3	3
MAJOR	Philosophy	History of Philosophy Elective		3
COGNATE	Electives	Electives	6	6
GE AREA IV	Humanities	Electives	6	6
GE AREA V	Phil.-T/RS	Philosophy/Religious Studies Elective	3	
			18	18
		SENIOR		
MAJOR	Philosophy	Contemporary and Free Electives	3	3
COGNATE	Electives	Electives	6	6
GE AREA IV	Humanities	Elective		3
GE FREE	Electives	Electives	6	3
			15	15
			TOTAL:	127 credits

*Departmental recommendations are indicated by an asterisk.

As a freshman Interdisciplinary Elective, the department recommends The Nature of Nature (Intd. 3), team-taught by a philosopher and physicist.

In the Cognate area of 24 hours, the department requires that 12 credits be focused in one field. It should be noted that six credits not required by the department in the Major area are added to the Free Area in senior year. These may be taken in any field including philosophy.

PHIL. 108
Metaphysics 3 credits
A textual inquiry into the adequacy of philosophers' answer to the fundamental question, "What is?". Special attention will be given to Plato, Aristotle, Aquinas, Kant's critical philosophy, and the issues of nature and history.

PHIL. 109
Philosophy of History 3 credits
This course will deal with important ideas in the two branches of philosophy of history (speculative and critical). What is the meaning and goal of history? Can we really know the past? Is historical knowledge different from scientific knowledge? Recommended for majors in history, politics, and communications.

PHIL. 110
Ethics 3 credits
A philosophical study of man's moral experience in terms of his meaning as a person. Themes investigated will include freedom of choice and its limitations in moral responsibility, problems of conscience, the meaning of moral value, the norm of morality, natural obligation and human rights and their implications for social involvement of the person and his relation to authority. Current moral relativism including "situation ethics" will also be considered.

PHIL. 112
Logical and Rhetorical Analysis 3 credits
A study of the principles of logic and persuasion, an analysis of fallacies, the principles of structure in written and oral composition. Practice in briefs and abstracts with an emphasis on exactness and clearness. (GE Area III)

PHIL. 113
Ancient Philosophy 3 credits
The Pre-Socratics, Plato, Aristotle and their immediate successors. Special emphasis on the Theory of Knowledge, the Metaphysics and Philosophical Anthropology of Plato and Aristotle.

PHIL. 114
Medieval Philosophy 3 credits
The origin and character of medieval philosophy, early Christian Philosophy, the controversy of the universals, oustanding thinkers of the early scholastic period and the influence of Islamic and Jewish philosophy.

PHIL. 117
Existentialism 3 credits
A critical study of key concepts in existential philosophy through selective works of Kierkegaard, Sartre, Marcel, and Jaspers. Emphasis is placed on the concepts of self and knowledge.

PHIL. 118
American Philosophy 3 credits
An introduction to the general history of American philosophy. American thought in the philosophies of religion, science and law, in transcendentalism, and idealism, in pragmatism and instrumentalism, is presented through representative thinkers and in historical context.

PHIL. 119
Philosophy of Science 3 credits
Lecture and similar techniques are used to introduce the student to the fundamental ideas and current research in the philosophy of science. The guiding concept is the meaning of the scientific method. Pragmatism (C.S. Peirce), Analytic Philosophy (Ayer, Wittgenstein), Positivism (Reichenbach), and Contemporary Realism (Whitehead).

PHIL. 121
Modern Philosophy I 3 credits
The Renaissance Background: Petrarch and the humanist movement: Galileo and the beginnings of modern science. Descartes: mathesis universalis; the difficulties of the Cartesian method; solution in the one substance of Spinoza. British Empiricism: Locke and the problem of substance; Berkeley's 'Esse est percipi', culmination in Hume and the doctrine of perceptual atomism.

PHIL. 122
Modern Philosophy II 3 credits
Leibniz: Cartesian and Spinozistic heritage, the problem of universal science; the Monodology Kant: influences of Leibniz, Hume and Newton; the "Copernican revolution" and "Transcendental Criticism". Fichte's transcendental idealism and Schelling's absolute idealism. Hegel and Phenomenology of Mind; reality as dialectical. Survey of later trends: Schopenhauer, Nietzsche, Bergson.

PHIL. 123
Foundations of 20th Century Philosophy 3 credits
A study of some of the key figures that have set the tone for 20th Century philosophy. Buber, Marx, Kierkegaard, Hume, and Russell are studied in detail.

PHIL. 124
The Philosophy of Religion 3 credits
The course concentrates in two areas: 1) The philosophy of religion of the American idealist, Josiah Royce, as presented in *The Problem of Christianity.* Here St. Paul's theology of the Church is interpreted in light of Royce's philosophy of community; 2) The phenomenology of religions is the background for considering the philosophy of religious myth, symbolism and language.

PHIL. 125
Language and the Existence of God 3 credits
A study of methods of expressing God's existence in language, this course will examine the proofs for the existence of God in Anselm,

Thomas Aquinas, and Descartes, analyze Kant's criticism and Hegel's reevaluation of such proofs, and reflect on modern theories of language about God.

PHIL. 128
Phenomenology 3 credits
Introduction to that development in philosophy which came to be called "the Phenomenological Movement". The modern movement is related to ancient Greek traditions and to Husserl and Heidegger. Analysis of primary sources.

PHIL. 129
Philosophy of Psychology 3 credits
Was Freud a Platonist? An examination of the philosophical assumptions and foundations of various modes of psychology. Freud, Jung, James, Sartre, Husserl, Skinner.

PHIL. 132
Medical Ethics 3 credits
(Prerequisite: Philosophy 110) Detailed analysis of the ethical aspects of abortion, euthanasia and preservation of life, sterilization and contraception, artificial insemination, experimentation on human beings, hypnosis, electroshock therapy and psycho-surgery. Recommended for pre-medical students.

PHIL. 133
Business Ethics 3 credits
(Prerequisite: Philosophy 110) The personal and social ethics of the major areas of decision making in business principles and case work will receive equal stress. Recommended for business majors.

PHIL. 135
Ethics of Personal Encounter 3 credits
After a treatment of the phenomenology of inter-subjectivity, the course addresses itself to the question: what essentially is the moral (and the immoral) encounter between individuals, between groups, between authority and those subject to it.

PHIL. 137
Phenomenology of Human Ambition 3 credits
Philosophical study of action, vitality, goals, human appetite, human greatness. The lives of Janis Joplin, Hitler, Vince Lombardi and Ignatius Loyola are required reading.

PHIL. 138
The Ethics of Addiction 3 credits
In the light of the morality of self-interest and obligations to others, this course is a study of human behavior, with stress on habits and addictions, especially alcoholism.

PHIL. 140
The Appetites and Passions 3 credits
A "sensate culture" seems, paradoxically, to be an apathetic culture. This course explores human drives and dreams, a matter of importance to philosophers from Aristotle to Sartre, in the light of the whole man, who is indeed much more than drives.

PHIL. 142
Peirce and the History of Ideas 3 credits
Pragmatism, the philosophy of signs, his metaphysics, categories and philosophy of religion and science; relationships to earlier philosophers and his future significance in America and abroad.

PHIL. 143
Philosophy of Josiah Royce 3 credits
America's systematic idealist philosopher is studied in relation to the problems of contemporary American culture. His moral philosophy and metaphysics, his theories of truth and of community.

PHIL. 147
Philosophy & The Contemporary Novel 3 credits
This course aims at a diverse philosophical interpretation of recent best selling novels that have unusual depth: Vonnegut, Burgess, Crichton.

PHIL. 148
The Philosophy of Communication 3 credits
This course will center on the phenomenon of communication from the non-verbal through the mass media. These observations will serve as a starting point for a metaphysics and an ethics of the interpersonal and social.

PHIL. 159
Perspectives I-II 3-6 credits
Major thinkers in the Western philosophical, religious, political and literary traditions. First semester covers classical thought, Hebrew scriptures, early Christian literature and medieval thought. Second semester covers Renaissance, Enlightenment and contemporary thought. First semester for theology credit; second for philosophy credit. See T/RS 158.

En/P 189
The Fragmented World 3 credits
(See description under Interdisciplinary Courses)

PHIL. 191-194
Senior Tutorial variable credit
A tutorial program open to Juniors and Seniors.

PHYSICAL EDUCATION

DR. WODDER, *Chairman*

The Physical Education Department aims to improve the physical fitness level of each student and improve and increase students' recreational skills. Emphasis is placed on instruction in a wide variety of popular sports, recreational and competitive athletics, especially those with carry-over value for post college years.

Physical Education is required two periods per week through the freshman and sophomore years. One credit hour is granted in Physical Education each semester. Classes are elected through a quarterly registration process.

Every regularly enrolled freshman and sophomore student except veterans must satisfy the Physical Education requirement unless excused by the Physical Education Department.

It is possible to be excused from Physical Education classes by application to the Physical Education Department if (a) a physician certifies that a student, for medical reasons, should not engage in vigorous physical activity; (b) a student is a member of an intercollegiate varsity team; (c) the department deems it advisable.

Grading: S—Satisfactory
U—Usatisfactory, requiring repetition of course
These grades will not be computed in the Quality Point Index.

PHYS. ED. 1, 2, 23 & 24
Physical Education
Students taking physical education may elect from the following: tennis, swimming, yoga, paddleball, weight training, slimnastics, basketball, volleyball, gymnastics, bowling, running, riflery, fishing, and rock climbing.

EDUC. 108
High School Coaching 3 credits
Especially useful for those who wish to teach and coach high school, this course is concerned with coaching psychology, organization, training and taping, and fundamentals of sports among other topics. (Applicable only to Free Area of General Education Program.)

COMM. 122
Sports Information Seminar 3 credits
(See description under Communications.)

John J. Long Athletic Center

PHYSICS

PROF. KALAFUT, *Chairman*

The objectives of the department are to provide skills, understanding, and the methodology required to initiate active participation in the development of new knowledge about the material universe. The approach of the physical scientist, based as it is on the analysis of mathematical models dealing with matter and energy and their interactions, supplies a unique and important insight to the solution of problems in many disciplines. Consequently, the department's degree programs are uniquely balanced and broad so that each provides the basic skills for many types of successful careers. We also expect that these broad based studies will enable the student to contribute significantly to the development of answers to those questions that currently plague society.

The strength of the department is evidenced by the fact that over the last ten years many of its graduates have been successful in further studies leading to the Ph.D. in Physics, and others have pursued successful careers in such fields as Electronics and Electrical Engineering, Nuclear Engineering, Oceanography, Geophysics and Medicine.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Physics 11-12	Elements of Physics I-II	4	4
COGNATE	Math 13-14 *or* Math 14-21	Pre-Calculus Math.-Calculus I Calculus I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15	15
		SOPHOMORE		
MAJOR	Physics 21-22	Elements Modern Physics—Statistics	4	3
COGNATE	Math. 21-22 *or* Math 22-101	Calculus II-III Calculus III—Differential Equations	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	French, German or Russian Language*	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			18	17
		JUNIOR		
MAJOR	Phys. 104-105	Electricity and Magnetism I-II	4	4
MAJOR	Phys. 102-110	Mechanics—Atomic Physics	3	4
COGNATE	Math. 101-Phys. 118	Differential Equations—Mathematical Physics	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			17	18
		SENIOR		
MAJOR	Phys. 111-123	Nuclear Physics—Advanced Mechanics	3	3
MAJOR	Phys. 121	Physics Research	1	1
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Elective	Elective	3	
			16	13

*Departmental recommendations are indicated by an asterisk.

TOTAL: 129 credits

ELECTRONICS MAJOR

	Dept. and No.	Descriptive Title of Course	Credits FALL	Credits SPRING
		FRESHMAN		
MAJOR	Phys. 11-12	Elements of Physics I-II	4	4
COGNATE	Math. 13-14 or Math. 14-21	Pre-Calculus Math.—Calculus I Calculus I-II	4	4
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			15	15
		SOPHOMORE		
MAJOR	Phys. 21-24	Elements of Modern Physics—Circuit Analysis	4	4
COGNATE	Math. 21-22 or Math. 22-101	Calculus II-III Calculus III—Differential Equations	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	French, German or Russian Language*	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			18	18
		JUNIOR		
MAJOR	Phys. 104-105	Electricity and Magnetism I-II	3	3
MAJOR	Phys. 106-107	Electronics Principles & Circuits I-II	4	4
MAJOR	Phys. 113-114	Computer Design Lab I-II	1	1
COGNATE	Math. 101-Phys. 118	Differential Equations—Math. Physics	4	4
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			18	18
		SENIOR		
MAJOR	Phys. 108—Elec.	Advanced Electronics—Elective	4	4
GE AREA II	Social/Behavior	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Relig. Stud. Electives	3	3
GE FREE	Elective	Elective	3	
			16	13
			TOTAL:	131 credits

English 7 (Writing Center) recommended for Communications elective in freshman year.
Other departmental recommendations indicated by an asterisk.

PHYS. 1 & 2
General Physics 8 credits
(Prerequisite: Mathematics 13-14) General college course for pre-medical, pre-dental and biology majors. Mechanics, heat, electricity and magnetism, sound, light and modern physics. Three hours lecture and recitation and two hours laboratory.

PHYS. 5
Evolution of the Universe 3 credits
Designed to give a qualitative understanding of current physical theories concerning the origin of the Universe, the formation of the elements and of stars and planets. The life cycle of stars, the formation of geological formations on earth, and current theories concerning the beginnings of life.

BIOPHYSICS

The Bio-Physics major is designed to prepare a student to apply the physical and mathematical sciences to problems arising in the life sciences and medicine. By proper electives, the student can prepare to enter graduate study of bio-physics, biology, bio-chemistry, medicine or dentistry.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Biol. 1 and 2	General Biology 1-2	4	4
MAJOR	Physics 11-12	Elements of Physics I and II	4	4
COGNATE	Math. 13-14 *or* Math. 14-21	Pre-Calculus Math—Calculus I *or* Calculus I-II	4	4
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	19
		SOPHOMORE		
MAJOR	Phys. 21-22	Modern-Statistical Physics	4	3
MAJOR	Biology or Chem.	Electives	4	4
COGNATE	Math 21-22 *or* Math 22-101	Calculus II-III Calculus III—Diff. Equations	4	4
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			19	18
		JUNIOR		
MAJOR	Phys., Biol., Chem.	Elective	3	
MAJOR	Phys., Bio, & Chem.	Elective		3
COGNATE	Chem. 101-102	Organic Chemistry I-II	4½	4½
GE AREA II	Social Behavior	Elective	3	3
GE AREA IV	Humanities	Elective	6	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
			16½	19½
		SENIOR		
MAJOR	Physics 112	Electronic Instr. for Scientists	4	
MAJOR	Physics 184	Biophysics		3
MAJOR	Phys., Bio., & Chem.	Elective	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective		3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			16	15

TOTAL: 139 credits

PHYS. 7
Introduction to Astronomy 3 credits
Introductory course in astronomy for non-science students. Survey of solar systems, stars, and galaxies. Observational basis of Astronomy. Astronomy vs. Astrology. Opportunity for observation will be provided.

PHYS. 8
Everyday Physics 3 credits
Practically-oriented course for non-science majors correlating physical concepts with everyday problems encountered with electrical devices and automobiles so that students can effect simple maintenance and repairs. Two hours lecture and demonstration; two hours laboratory.

PHYS. 9
Energy and the Environment 3 credits
A course for non-science majors that emphasizes the various aspects of man's use of energy and changes in the environment that accompany that use. Sources of energy; the nature of the present energy and environmental crises and possible solutions; energy requirements of the future; cost of energy. Three hours lecture and demonstration.

PHYS. 11 & 12
Elements of Physics 8 credits
(Corequisite: Mathematics 14-21) Basic college course, employing methods of the calculus, for physics, electronics, mathematics, and chemistry majors. Mechanics and heat, sound, light, electricity and magnetism. Three hours lecture and recitation and two hours laboratory.

PHYS. 21
Elements of Modern Physics 4 credits
(Prerequisite: Physics 12) Introductory Modern Physics course for physics and electronics majors; also recommended for other science students. Review of classical physics, introduction to atomic and nuclear physics. Three hours lecture and recitation and two hours laboratory.

PHYS. 22
Statistical Physics 3 credits
(Prerequisites: Physics 21, Mathematics 22) An intermediate course designed to show how the basic notions of atomic theory lead to a coherent conceptual framework capable of describing and predicting the properties of macroscopic systems consisting of many atoms or molecules. It provides an introduction to the subjects of Statistical Mechanics, Kinetic Theory, Thermodynamics, and Heat. Recommended for physics majors. Three hours lecture.

PHYS. 24
Circuit Analysis 4 credits
(Prerequisite: Physics 21) Intermediate course treating Kirchoff's Laws, resistance networks, steady state and transient condition in RC, RI, and RLC networks, Thevenin's and Norton's Theorems, and simple electronic devices and their equivalent circuits. Three hours lecture and two hours laboratory per week.

PHYS. 25-26
Role of Electronics in Communication 3 credits
Fundamentals of conversion of audio and visual signals to electrical signals. Transducer, microphones, cameras. Transmission of electrical signals, reception and reconversion back to audio or visual. Electro-magnetic storage of information. These six credits are sufficient to prepare the student for the second class radiotelephone operator's examination.

PHYS. 100
Circuit Analysis II 3 credits
(Prerequisites: Physics 24; Mathematics 101) General electrical network theorems; analysis of general electrical circuits; three-phase circuits; filters. Three hours lecture.

PHYS. 102
Mechanics 3 credits
(Prerequisite: Physics 12; Corequisite: Mathematics 101) Introduction to theoretical mechanics treating statics and dynamics of particles and extended bodies; motion of bodies by conservative and dissipative forces; energy relations; generalized coordinates and Lagrange's equations.

PHYS. 103
Optics 4 credits
(Prerequisite: Physics 21) Review of Geometrical optics. Image formation by thick and thin lenses. Lens aberrations. Introduction to plane and spherical wave equations. Fraunhofer and Fresnel diffraction. Interference. Polarization. Introduction to quantum optics using the LASER. Three hours lecture. Two hours laboratory.

PHYS. 104
Electricity and Magnetism I 3-4 credits
(Prerequisite: Physics 21; Mathematics 101 may be taken concurrently) Analytical treatment of electrical and magnetic theory; electrostatic

fields; direct currents and circuits; measurements; magnetism. Lecture and laboratory required of Physics majors: D.C. circuit characteristics and measurements. Magnetic field measurements. Electronics majors take lecture only and PHYS. 113 for laboratory.

PHYS. 105
Electricity and Magnetism II 3-4 credits
(Prerequisites: Physics 104, Mathematics 101) Electromagnetic induction, circuit transients, alternating current circuits; measurements; electromagnetic fields and waves. Lecture and laboratory required of Physics majors: D.C. circuit transients and A.C. circuit measurements. Electronics majors take lecture only and PHYS. 114 for laboratory.

PHYS. 106
Electronic Principles and Circuits I 4 credits
(Prerequisites: Physics 12; Mathematics 22) Physical principles of electronic vacuum tubes and semiconductor device characteristics; analysis of diode circuits. Three hours lecture and two hours laboratory.

PHYS. 107
Electronic Principles and Circuits II 4 credits
(Prerequisites: Physics 106; Physics 24) General analysis of basic vacuum tube and transistor electronic amplifiers. Includes DC biasing and AC equivalent circuits at high and low frequencies. Three hours lecture and two hours laboratory.

PHYS. 108
Advanced Electronics 4 credits
(Prerequisite: Physics 107) Applications of electronic devices to high and low pass amplifiers, feedback amplifiers, oscillators, op amps, and power supplies. Three hours lecture and two hours laboratory.

PHYS. 110
Atomic Physics 4 credits
(Prerequisite: Physics 21 & Mathematics 101) Intensive and quantitative treatment of modern Atomic Physics with particular emphasis on atomic structure, introducing the principles and techniques of the Quantum Theory. Required of physics majors. Three hours lecture and three hours laboratory.

PHYS. 111
Nuclear Physics 3 credits
(Prerequisite: Physics 110) The study of nuclear models and force theories. Natural and induced radioactivity, theory and measurement of alpha, beta and gamma decay; nuclear reactions including fission and fusion. Three hours lecture.

PHYS. 112
Electronic Instrumentation for Scientists 4 credits
(Prerequisite: Physics 1 & 2 or Physics 11 & 12) Laboratory oriented course designed to acquaint scientists who have had no formal courses in electronics with the theory and operation of electronic instruments and selected circuits. Analysis of electronic systems used in the various sciences. Two hours lecture and four hours laboratory.

PHYS. 113
Computer Design Laboratory I 1 credit
(Prerequisite: None) Introduction into the design, construction and testing of digital logic circuits. Applications include simple logic circuits, adders, flip-flops, registers, counters, memories and calculators. Two hours laboratory.

PHYS. 114
Computer Design Laboratory II 1 credit
(Prerequisite: Physics 113) Introduction into the design, construction and testing of digital logic circuits. Applications include microprocessors, static and dynamic memories, input/output devices and their interfaces. Two hours laboratory.

PHYS. 118
Mathematical Physics I 4 credits
(Prerequisite: Math 101) Determinants and Matrices. Fourier Series. Laplace Transformations. Introduction to Partial Differential Equations and Boundary Value Problems. Special Functions of Physics, including Bessel Functions, Legendre Polynomials, etc.

PHYS. 120
Undergraduate Physics Theses 1 credit
(Prerequisites: 24 credits in physics; 20 credits in mathematics) Recommended for senior physics majors; for the purpose of evaluating the student's capacity for individual study and research on a specific physical problem. Assignment of problem to be arranged with the department Chairman.

PHYS. 121
Undergraduate Physics Research variable credit
Recommended for senior physics and elec-

tronics students who pursue a specific physical research project to gain experience with research literature, techniques and equipment. Projects are recommended by members of the department and approved by the Chairman. Written report required.

PHYS. 123
Advanced Mechanics 3 credits
(Prerequisite: Physics 102) Variational principles and Lagrange's equations. Euler's equations of motion; Hamilton's equations of motion; canonical transformations; Hamilton-Jacobi theory. Recommended for physics majors.

PHYS. 125
Radiation Science 3 credits
(Prerequisite: Physics 12 or Physics 2) Introduction to the detection of alpha, beta, gamma, X-ray and neutron emissions. Primary emphasis is placed on measurement but some time is devoted to theory of radioactive decay. Emphasis is also placed on safety precautions and dangers associated with the various types of radiation. (2 hrs. lecture, 2 hrs. laboratory)

PHYS. 153
Mathematical Physics II 3 credits
Functions of a Complex Variable. Infinite Series in the Complex Plane. Theory of Residues. Conformal Mapping. Fourier and Laplace Transforms. Advanced Partial Differential Equations. Boundary Value Problems in Physics. Green's Functions.

PHYS. 184
Biophysics 3 credits
(Prerequisite: Physics 22) Introduction to the theory of transport phenomena that are significant both in the living cell and in the physical characterization of bio-macro molecules from the standpoint of statistical mechanics and non-equilibrium thermodynamics. Molecular resonance phenomena are also covered. (3 hrs. lecture)

PHYS. 191 & 192
Guided Independent Study variable credit
A tutorial program open to junior Honors students only. Content determined by mentor. Suggested topics: particle statistics; solid state physics; quantum theory and electronic structure of atoms; nuclear energy.

PHYS. 195 & 196
Senior Tutorial variable credit
A tutorial program open only to senior Honors students majoring in physics. The course involves the preparation of a special project which is reported in writing and defended orally before the faculty of the department.

Dr. Gene McGinnis, Professor, Department of Physics, and Baird-Atomic 3-Meter Spectograph

POLITICAL SCIENCE

DR. DeMICHELE, *Chairman*

The Bachelor of Science degree program in political science aims to accomplish the following objectives: 1. to give the student a thorough understanding of the nature and purposes of civil society; 2. to impart a sound knowledge of the philosophical basis of democracy; 3. to enable him to appreciate the problems of his own government at work; and 4. to relate the American system to the governments of other states in the international community.

POLITICAL SCIENCE

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	Pol. Sci. 11-12	Political Science Inquiry I-II	3	3
COGNATE	Hist. 1-2	United States History	3	3
COGNATE	Math. 1-2	Math. Discovery I-II	3	3
GE AREA III	Communications	Elective		3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Pol. Sci. 101-102	American National Government	3	3
COGNATE	Hist. 3-4	Europe: 1500 to the Present	3	3
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Pol. Sci.	Electives	6	6
COGNATE	Soc. Sci.	Social Science Elective	3	
COGNATE	Pol. Sci. 133	Political Science Statistics		3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy or Theology/Religious Studies		3
GE FREE	Electives	Electives	3	3
			15	18
		SENIOR		
MAJOR	Pol. Sci.	Electives	6	6
GE AREA I	Nat. Sci./Quant.	Elective	3	
GE AREA IV	Humanities	Electives	6	6
GE AREA V	Phil.-T/RS	Philosophy or Theology/Religious Studies		3
			15	15

TOTAL: 127 credits

As Communications elective in GE AREA III, the department recommends English 2 and 7 and Computer Science 20. For GE AREA IV Humanities electives, the department recommends Hist. 122-23, 142-3, 150. In the GE FREE AREA, the department recommends a modern foreign language in junior year with subsequent language courses to follow in senior year as part of GE AREA IV (humanities). The departmental advisor should be consulted.

PUBLIC ADMINISTRATION-PUBLIC AFFAIRS

Intended to improve society by providing professional and pre-professional training for men and women who seek careers as agency administrators, program directors, staff analysts in local, state or federal government, or other public service organization, the public affairs/public administration major is also specially suited for those who wish to pursue graduate studies in law, political science, business, planning or development.

Analytical and quantitative skills are developed in combination with a firm background in the social and behavioral sciences in order to provide: 1. substantive knowledge of a range of societal problems, the unique political environment in which the problems exist, and management systems for achieving implementation of policy decisions; 2. management skills in the areas of motivation and leadership, organizational management, personnel management and program evaluation; 3. sensitivity to values of public interest, equal rights, economic, social, cultural and religious institutions.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Pol. Sci. 5-6	Introduction to Public Administration	3	3
COGNATE	Economics 11-12	Modern Economic Society	3	3
AREA I	Math. 1-2	Math Discovery	3	3
AREA III	Communications	Communications Elective*	3	
AREA V	Philosophy 20	Introduction to Philosophy		3
AREA V	T/RS 6	T/RS Elective	3	
FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Pol. Sci. 101-102	American National Government	3	3
COGNATE	Business 108	Organization and Management	3	
COGNATE	Business 172	Administrative Practices		3
AREA III	Elective-CMPS	Elective*-Intro. to Computer Science	3	3
AREA IV	Electives	Electives***	3	3
AREA V	Philosophy 110	Ethics		3
AREA V	T/RS	Elective	3	
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Pol. Sci. 107-108	Advanced Public Administration/ Legislative Process	3	3
MAJOR	Pol. Sci. 131-133	Administrative Law-PS Statistics	3	3
COGNATE	Economics 159	Public Finance & Taxation	3	
COGNATE	Business 1-2	Elementary Accounting	3	3
AREA V	Philosophy-T/RS	Elective		3
FREE	Electives	Electives	3	3
			15	15
		SENIOR		
MAJOR	Pol. Sci. 195	Practicum/Independent Study		3
MAJOR	Pol. Sci. Elec.	Electives**	6	3
COGNATE	Bus./Economics	Elective		3
AREA I	Nat. Sci./Quant.	Elective	3	
AREA IV	Humanities	Electives***	6	6
AREA V	Philosophy-T/RS	Elective	3	
			18	15

TOTAL: 127 credits

*Department recommends English 2 and 7 for Area III electives.

**Major electives to be selected from PS 105, 106, 110, 111, 112, 117, 118, 127, 132, 159, 181, 186 with consultation of Advisor.

***Department recommends History 1-2 and 3-4 for Area IV electives.

POL. SCI. 5
Introduction to Public Administration I 3 credits
Introduction to the study of the public bureaucracy. Issues of organization, staffing and financing are considered. The politics of budgeting and of bureaucratic behavior are analyzed.

POL. SCI. 6
Introduction to Public Administration II 3 credits
Introduction to the analysis of public policies. Problems in the innovation, implementation and evaluation of public programs are analyzed. PPBS and alternative budgeting systems are surveyed.

POL. SCI. 11
Political Science Inquiry 3 credits
An introduction to the major concepts, goals and philosophical foundations of political inquiry, including description of the scope of contemporary political science and its sub-fields.

POL. SCI. 12
Political Science Inquiry II 3 credits
An introduction to the methods of policial analysis, both normative and empirical. Emphasis on developing the student's ability to define and analyze political problems.

POL. SCI. 101 & 102
American National Government 6 credits
(Prerequisite: History 1 & 2) An analysis of society, state, authority, and common good. Forms of government. The constitution, federalism, structure, operations and functions of the three branches.

H/P 103
Saving America's Past 3 credits
An introduction to the problems of the changing urban-suburban environment. Using Lackawanna County as a model study region, the issues of urban planning, architectural recycling, historic preservation and citizen awareness will be explored. Approach: walking tours of Scranton and surrounding communities.

POL. SCI. 104
Presidential Elections 3 credits
An examination of the process by which the American Chief Executive is selected, including primaries, conventions, campaigns and other factors. The evolution of the process from the Early National period to the present. Elections of particular significance will be studied in detail.

POL. SCI. 105
State Government 3 credits
The natural constitutional position of the states and the changing federal-state relationships. State governments in actual operation. Emphasis on Pennsylvania and actual problems of procedure and policy.

POL. SCI. 106
Local Government 3 credits
Types and evolution of local government; constitutional and statutory limitations; functions of divisions; structure and operation.

POL. SCI. 107
Public Administration 3 credits
An inquiry into the new organizational theory; management dynamics; recent developments affecting administrative policy-making such as planning-programming-budgeting (PPB) and collective bargaining.

POL. SCI. 108
Legislative Process 3 credits
An investigation into the legislative process at both federal and state levels. Special attention is given to the structure for decision-making; partisan and interest-group influences; executive and judicial interactions.

POL. SCI. 109
Executive Process 3 credits
An in-depth study of the offices of the president and state governor as action agencies in their respective spheres of government.

POL. SCI. 110
Legal Process 3 credits
An inquiry into the major theories of jurisprudence; development of American legal theory and practice; structure, functioning, and contemporary problems of the federal and state court systems.

POL. SCI. 111
International Relations 3 credits
A survey of workings in the nation-state system; power politics; equilibrium mechanisms; organizational functionalism; Third World forces.

POL. SCI. 112
The Politics of Budgetary Process 3 credits
An in-depth analysis of the procedures, forms and decisional process involved in the preparation of governmental budgets. Emphasis placed on the development of the national budget and executive department lobbyists.

POL. SCI. 115
Modern Political Thought 3 credits
A study of the theoretical foundations of the three major political idea-systems identified with the twentieth century; communism, fascism, and democracy.

POL. SCI. 116
Ideologies of the Developing Nations 3 credits
An inquiry into the idea-systems of emerging nations in the Third World: nationalism, democratic socialism, elitism, regionalism.

POL. SCI. 117
Regulatory Process 3 credits
An inquiry into the modes of federal and state regulation of business practices in the public interest.

POL. SCI. 118
Innovative Public Services 3 credits
A survey of the types of services instituted by the three levels of government in the U.S. during recent years.

H/PS 120-121
American Diplomatic History 6 credits
A study of American diplomatic history and principles. The Revolution. Early American policies on isolation and expansion. The Monroe Doctrine. Manifest Destiny. American imperialism and the Spanish-American War. Latin American diplomacy in the twentieth century. World War I. World War II. Cold War. Contemporary problems.

H/PS 122-123
American Constitutional and Legal History 6 credits
(Recommended for background: History 1 & 2)
The juridical concepts of the colonial and revolutionary periods; background of the Federal Convention; the nature of the Constitution, its interpretation by Marshall and Taney. The constitutional problems occasioned by the Civil War; the new amendments; the role of the States in a Federalist system. Key cases analyzed in detail and set in historical perspective.

H/PS 124-125
American Political and Social Thought 6 credits
(Recommended for background: History 1 & 2)
An inquiry into the major philosophies which helped shape our institutions. Puritan concepts; view of the independents; pre-Revolutionary society and thought and the notion of independence; the Constitution as it represents a compromise between the conservative and liberal traditions; Jeffersonian and Jacksonian democracy; social, economic, and political ramifications of the slavery question. Triumph of the nationalist view; recent tendencies; liberty in American society.

POL. SCI. 126
The Political Parties of the United States 3 credits
The origins, nature and functions of parties under our American system of government.

POL. SCI. 127
American Intergovernmental Relations 3 credits
A comprehensive treatment of all aspects of inter-governmental relations including regional and sectional as well as federal-state, federal-local and state-local.

POL. SCI. 130
International Development 3 credits
Designed to familiarize the student with multi- and bilateral aid programs for facilitating modernization of Third World nations—as well as with problems inherent in accelerated socio-economic change.

POL. SCI. 131
Administrative Law 3 credits
Administrative decision-making by regulatory agencies; legally-protected rights of persons and corporate entities; judicial review of administrative determinations; use of case method.

POL. SCI. 132
The Urban Crisis 3 credits
The course will examine the interaction between the federal government and the cities including traditional backgrounds, relations during the 19th and 20th centuries, the effect of the New Deal, the role of the Supreme Court in a federal system, role of the Federal Government since the New Deal; the impact of the Housing and Community Development Act of 1974, the fiscal dilemma confronting major cities and federal alternative solutions.

POL. SCI. 133
Political Science Statistics 3 credits
The areas treated include frequency distributions, measures of dispersion, simple partial and multiple correlation; probability; sampling; graphic analysis.

POL. SCI. 134 & 135
Comparative Government 6 credits
A representative sampling of foreign political forms and processes (including non-Western), as contrasted with those in the United States.

POL. SCI. 140
Geopolitics 3 credits
A study of geographic factors on World History. Geographic factors in national power and international relations; an analysis of the role of "Geopolitics" with reference to the current world scene.

H/PS 142
English Constitutional and Legal History to 1485 3 credits
Anglo-Saxon basis; fusion of Anglo-Saxon and Norman political institutions; Angevin innovations; Magna Carta; concept of representation; beginnings of the Common Law; jury system; content for government; emergence of Parliament; the refinement of government.

H/PS 143
English Constitutional and Legal History, 1485 to the present 3 credits
Tudor absolutism; struggle between royal prerogative and Parliament; rise of the House of Commons; Parliamentary supremacy after 1688; development of Cabinet government; democratic reforms; Parliamentary Bill of 1911; extension of administrative law.

H/PS 148
War and Modern Society 3 credits
Role of military force in international relations; historical background focusing on wars, American and European, of 19th and 20th centuries; theories of function of war; arms control and deterrence of war.

H/PS 152
Soviet Foreign Policy 3 credits
Examination of the course of Soviet Foreign Policy from 1917 to present. Analysis of forces, factors and motives that have molded Soviet history and its relations with other nations.

POL. SCI. 155
The Chief Justices 3 credits
An examination of tenures of the Chief Justices of the United States. Special emphasis will be given to the major decisions of each tenure and the impact the decisions have on American Constitutional Doctrine.

POL. SCI. 159
Whose Country America? 3 credits
The course will focus on the deeper forces underlying the surface features of American politics and society today. It will assess the impact of the rich and super rich, the military and industrial complex, the auto complex, labor unions, the communications media and others on contemporary American life.

POL. SCI. 175
Contemporary World Problems 3 credits
Focus on major problems which continually confront world in modern times. U.S. problems emphasized: war, violence, poverty, ecology.

H/PS 176
World Politics 3 credits
Deals directly with the political, economic, and social issues that are current in international affairs including the future possibilities of world order and the crises of foreign policy-making.

POL. SCI. 181
Political Behavior 3 credits
A survey of the major research findings in the field. Topics include the political psychology of the individual, voting behavior, political extremism and violence, and aspects of elite and institutional behavior.

POL. SCI. 182
Survey Research and Polling 3 credits
The logic and methods of survey research, primarily as applied in political polls.

POL. SCI. 184
Political Campaign Management 3 credits
Planning and execution of the modern political campaign. The role of the political party, the candidate, the campaign staff, professional consultants; the mass media and opinion polls.

POL. SCI. 186
Power and Policy 3 credits
An examination of the concept of political power and its relation to the formulation of public policy. Consideration of pluralist and elitist conceptions of political decision-making, with emphasis on empirical studies.

H/PS 188
Ethnic & Racial Minorities in Northeastern Pennsylvania 3 credits
Film-seminar approach to study of various ethnic groupings in Northeastern Pennsylvania. Seeks to achieve better understanding of the immigrant's problems and his accomplishments through use of documentary and feature films.

PSYCHOLOGY

DR. O'MALLEY, *Acting Chairman*

The faculty in Psychology seeks to: 1. prepare the student with a basic, systematic knowledge of psychological method and content; 2. provide the able student with scholarly learning experiences in preparation for successful graduate study; 3. complement the offerings of other departments with courses of value to general education or of worth to the specific majors of these departments.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Psych. 23-26	Fundamentals of Psych.—Theories of Personality	3	3
COGNATE	Math. 1-2 or 3-4	Math. Discovery I-II or Quantitative Methods	3	3
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.—Elective	Interdisciplinary Elective—Elective	3	3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Psych. 148-24	Social Psychology—Psych. Stat. I	3	3
COGNATE	Biol. 106-107	Heredity—Anatomy & Physiology	3	3
COGNATE	Elective	Elective		3
GE AREA II	Soc. 21-22	Principles of Sociology—*Social Problems*	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 110	Ethics	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Psych. 141-144	Psych. Measurement—Psych. Development	3	3
MAJOR	Psych. 142-143	Experimental Psychology	4	4
MAJOR	Psych. 150-151	Proseminar	3	3
GE AREA II	Soc. 103-104	Criminology*—Cultural Anthropology*	3	3
GE AREA IV	Humanities	Electives	6	6
			19	19
		SENIOR		
MAJOR	Psychology	Electives	6	3
COGNATE	Electives	Electives	3	6
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
			15	15

Departmental recommendations are indicated by an asterisk. TOTAL: 132 credits

PSYCH. 23

Fundamentals of Psychology 3 credits

An introduction to the science of psychology with emphasis on the nature of behavioral data, learning paradigms, and assumptions underlying the fundamental principles of development and motivational-emotional processes. Introduction to, and familiarization with, the basic sources in psychology including journals and handbooks.

PSYCH. 24
Psychological Statistics I 3 credits
Descriptive statistics, correlation, regression, sampling, estimation.

PSYCH. 25
Human Behavior 3 credits
(Prerequisite: Psyc. 23) The course is designed to increase the student's understanding of the process of psychological adjustment from the theoretical and applied points of view.

PSYCH. 26
Theories of Personality 3 credits
(Prerequisite: Psyc. 23) A survey and critical evaluation of the major theories of personality and their implications for personality assessment, psychotherapy, and research.

PSYCH. 141
Psychological Testing 3 credits
(Prerequisites: Psych. 23 & 24) Provides a thorough grounding in principles of testing and measurement; with a detailed study of variance as related to reliability and validity of tests.

PSYCH. 142
Experimental Psychology:
Sensation and Perception 4 credits
(Prerequisites: Psych. 23 &24) Concerns the experimental study of sensory mechanisms and perceptual phenomena. Supervised individual experimentation. Two hours lecture. Four hours laboratory. Lab fee: $20.00.

PSYCH. 143
Experimental Psychology:
Conditioning and Learning 4 credits
(Prerequisites: Psych. 23 & 24) Concerns the experimental study of both classical and instrumental conditioning. Supervised animal and human experimentation. Two hours lecture. Four hours laboratory. Lab fee: $20.00.

PSYCH. 144
Psychology of Development 3 credits
(Prerequisite: Psych. 23) Emphasis on psychological research in field of child development. Theories of Freud, Piaget and the learning theorists as they influence this research.

PSYCH. 145
Abnormal Psychology 3 credits
(Prerequisite: Psyc. 23) A survey of the major theories, research, and issues in the description, classification, etiology, and treatment of abnormal behavior.

PSYCH. 146
Psychological Statistics II 3 credits
(Prerequisite: Psych. 24) An introduction to scientific method and experimental design. Emphasis is placed on the kinds and sources of error in experimentation, methods of control and design of experiments.

PSYCH. 147
Physiological Psychology 4 credits
(Prerequisite: Psych. 23) Relationship between behavior and the structure and function of the organism. The neurological bases of motivation, sleep, learning and memory. Lab may be taken only with permission of instructor. Endocrine gland extirpation and stereotaxic surgery. Three hours lecture, two hours lab. Lab Fee: $20.00.

PSYCH. 148
Social Psychology 3 credits
(Prerequisite: Psych. 23) Social determinants of behavior from a psychological perspective. Topics include affiliation, conformity, persuasion and attitude change, person perception.

PSYCH. 149
Industrial Psychology 3 credits
(Prerequisite: Psych. 23) The principles and techniques in selection and management; job analysis, occupational descriptions; employment procedures; interviews, tests, etc.

PSYCH. 150
Research Methodology 3 credits
(Prerequisite: Psych. 23 & 24) Problems and issues in interpreting and designing research in the behavioral sciences.

PSYCH. 151
History and Systems of
Psychology 3 credits
(Prerequisite: Psych. 23) Historical origins of various schools of thought and current views in psychology. Philosophical as well as empirical traditions are emphasized.

PSYCH. 152
Motivation and Emotion 3 credits
(Prerequisite: Psych. 23) An introduction to the psychological literature on motivation and emotion. Focus will be on the cognitive and physiological influences on these phenomena.

PSYCH. 160 & 161
Undergraduate Research 6 credits
Individual study and research on a specific problem. May be taken only with the permission of the professor. Lab fee: $20.00.

SOCIOLOGY

PROF. RIELLY, *Chairman*

Courses in Sociology seek to provide both the terminal student and the prospective graduate student with a basic understanding of the forces that are part of the social process. In addition, the courses are designed to help the student interested in the field of Social Work or Social Welfare to attain a pre-professional orientation to these fields.

Students interested in Social Work or Social Welfare are advised to include Soc. 106, 107 and 109 in their planning.

	Dept. and No.	Descriptive Title of Course	Credits	
		FRESHMAN	FALL	SPRING
MAJOR	Soc. 21-22	Principles—Social Problems	3	3
COGNATE	Psych. 23	Fundamentals of Psychology	3	
GE AREA III	Communications	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy	3	
GE AREA V	T/RS	Theology/Religious Studies Elective		3
GE FREE	Intd.	Interdisciplinary Elective		3
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	Soc. 117-118	History of Sociological Thought I-II	3	3
MAJOR	Sociology	Electives	3	3
COGNATE	HSrv. 11-Soc. Sci. Elec.	Foundations of Human Services—Elective	3	3
GE AREA III	Communications	Elective	3	
GE AREA IV	Humanities	Elective	3	
GE AREA V	Phil. 110	Ethics		3
GE AREA V	T/RS	Theology/Religious Studies Elective		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	Soc. 122-112	Statistics—Social Research Methods	3	3
COGNATE	Pol. Sci.	Political Science Elective	3	
GE AREA I	Nat. Sci./Quant.	Electives	6	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Phil.-T/RS	Philosophy and/or Religious Studies	3	3
GE FREE	Elective	Elective		3
			18	15
		SENIOR		
MAJOR	Soc. 191, 198, 199	Internship/Electives/Independent Study	3	3
COGNATE	Soc. Sci. Elec.	Electives	3	3
COGNATE	Hist./Pol. Sci.	History/Political Science Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

In GE AREA I, the department recommends Natural Science I and 101, and/or Biology 3 or 4. In GE AREA III, the department recommends Engl. 2, Engl. 7, and CMPS 21, Programming for Social Scientists. In the COGNATE Social Science Electives, the department recommends Human Services and/or Psychology electives. It should be noted that 3 additional credits are added to the FREE AREA rather than the major area.

SOC. 21
Principles of Sociology 3 credits
Fundamental principles in the field of sociology. Stratification, ethnicity, deviance. The basic institutions of society; social change and demographic trends.

SOC. 22
Social Problems 3 credits
Application of sociological principles to major issues in contemporary society.

SOC. 104
Cultural Anthropology 3 credits
Cultural and social organization among primitive or preliterate societies; marriage, property, religion, magic and tribal control. Significance of the study of primitive cultures for understanding of urban, industrial civilizations.

SOC. 106
Community Organization 3 credits
A general introduction to the field and process of community organization, both as a field of social work and as a field of human endeavor. The coordination and financing of welfare activities, methods of appraising community needs and resources, planning and the initiation of welfare services. Services of a voluntary and governmental nature, strategies of power.

SOC. 107
Child Welfare 3 credits
Development of child welfare in the United States. Educational, health, recreational and child labor regulations. Study and treatment of children in their own homes, foster homes and institutions. Child care and protective programs on federal, state and local level.

SOC. 109
Introduction to Social Work 3 credits
Growth of social work as a professional endeavor. The scope of social work; case work in the medical, psychiatric, family and child welfare and guidance field, community organization as exemplified in the United Fund and Planning Council, social research, social planning, social group work. Current trends in social work.

SOC. 110
Marriage and the Family 3 credits
An historical, comparative, and analytical study of marriage and family institutions. Problems of courtship, mate selection, and marriage adjustment in modern society.

SOC. 111
Urban Sociology 3 credits
Urban ecology and culture as the dominant form of community life in contemporary society; its characteristics, peculiarities, and problems.

SOC. 112
Methods of Social Research 3 credits
The logic and character of scientific and alternative means of social inquiry. Obtaining, recording, interpreting, and publishing research materials; the use and interpretation of statistical procedures.

SOC. 114
American Minority Groups 3 credits
Patterns of adjustment between ethnic and racial groups, with special attention given to the American scene. Prejudice and discrimination as opposed to the democratic ideology.

SOC. 117
History of Sociological Thought I 3 credits
Background and development of sociology with emphasis upon the men and ideas that strongly influenced the discipline; particular emphasis on the works of Comte, Durkheim, Weber, Simmel, Pareto and Marx, and on the social context in which they originated.

SOC. 118
History of Sociological Thought II 3 credits
An examination of major current theoretical developments in sociological theory and a critical review of theories of leading contemporary sociologists.

SOC. 119
Demography 3 credits
A study of the basic variables of population, birth, death and migration, socio-economic and cultural variables affecting population, growth, projections and forecasts. The chief natural and social demographic theories. Population policies and practices in selected world areas.

SOC. 121
Sociology of Religion 3 credits
A typological study of religion in interaction with secular society. Influence of Durkheim and Weber; analysis of religious sects.

SOC. 122
Social Statistics 3 credits
A course in applied statistics for the sociologist and social worker. The areas treated include frequency distributions, measures of association such as linear correlations, probability, hypothesis testing, and tests of significance.

SOC. 125
Sociology of the Aging 3 credits
The study of the development and group behavior of adults following maturation, and the social phenomena giving rise to and arising out of the presence of older people in the population.

H/SO. 134
Introduction to Archaeology 3 credits
An introduction to the study of archaeology from anthropological and historical perspectives. Areas to be explored include survey and site recognition, excavation planning, record keeping, treatment of artifacts and above-ground archaeology.

SOC. 148
Social Psychology 3 credits
Study of individual behavior as affected by cultural and social stimuli. Emphasis on the analysis of human conduct in social settings.

SOC. 150
Industrial Sociology 3 credits
Modern industrialism as social behavior. Social conditions in the rise of industrialism and their effect on the worker; collective bargaining and industrial conflict, the industrial community; social classes and the industrial order.

SOC. 191-192
Independent Study in Sociology 3 credits
Designed for advanced students who are capable of independent study. A program of planned research under the guidance of a faculty member. Registration upon approval of Chairman of the Department and instructor directing the study.

SOC. 198-199
Internship in Social Work 3 credits
Practicums designed to broaden the educational experience of students through practical experience and work assignments with governmental and/or community agencies in the field of social work. Supervision by a faculty member and agency supervisor. In selected cases a student may receive credit for part time paid experience. In either case, approval of mentor is necessary. Limited to juniors and seniors.

Approved courses from other curricula: sociology majors may be advised to choose several courses taught in the Law Enforcement sequence—Courses subject to such approval include:

S/LE 103 Criminology
S/LE 113 Juvenile Delinquency
S/LE 115 Organized Crime Patterns
S/LE 123 Law and Society

THEOLOGY AND RELIGIOUS STUDIES

PROF. STEPHEN CASEY, *Chairman*

The religious dimension of human life is of such importance that it must be explored in a liberal arts curriculum. Whether one regards the history of man, his grappling with present problems, or his planning for the future, religious faith is always to play a significant role.

The Bachelor of Arts degree program in theology and religious studies requires thirty credit hours in the major field.

The General Education requirement for all students at the University of whatever religious persuasion is six credit hours in theology or religious studies courses. Additionally, they have the option of completing another six hours in either philosophy or theology/religious studies to complete the GE AREA V requirements. T/RS 140 Jewish Theological Thought and T/RS 141 The Protestant Faith are taught, respectively, by a Jewish rabbi and Protestant Minister.

All freshman students in the college take T/RS 6, a non-denominational introductory course on the role of religious experience in human life. Beyond Freshman year, for the second required course in Theology/Religious Studies, students may select from any upper division course (course numbers in the 100's).

T/RS 6
Belief and Unbelief 3 credits
Focus on the phenomena of religious experience operative in human history as well as contemporary culture. An analysis of the past and present forms of belief and unbelief.

T/RS 110
God in Contemporary Thought 3 credits
Introduction to the problematic of God. The question of God in history and today; an analysis of human experience in its religious-theistic dimension; an analysis of Judaeo-Christian tradition as witnessed in biblical experience; process theology's attempt to ground the biblical affirmation of God in experience.

T/RS 115
Pauline Letters 3 credits
A study of the correspondence attributed to the Apostle to the Gentiles. Literary and historical analysis of the epistles with stress on their background and the theological perspectives of St. Paul.

T/RS 116
The Gospels and Jesus 3 credits
An introduction to the historical and cultural background of the four gospels. Emphasis on the exegesis of the gospel texts and the various stages of literary formation with the major theological teachings of the individual evangelists.

T/RS 117
Inside the New Testament
The message of Jesus as understood by the earliest Christian communities. Included will be an introduction to the thought-world of Christianity and its Jewish background, as well as an examination of contemporary approaches to interpreting the New Testament.

T/RS 119
Christian Origins 3 credits
A survey of the Jewish and Greek influences forming the background for emergence of Christianity, combined with a critical examination of the first seventy years of Church history. Pagan, Jewish and Christian sources will be studied.

T/RS 124
Faith and Reason 3 credits
The problem of faith and reason, that is, intellectual difficulties with belief and the objects of belief, reexamined in the light of contemporary epistemology. An in-depth study, taking in both the problem of truth and the problem of knowledge.

T/RS 126
Christian Spirituality
An historical, analytical, appreciative study of the fundamental principles and development of Christian ascetical theology. Traditional concepts such as faith, prayer, sin, conversion, discernment, peace, consolation, desolation, repentance and mortification are examined and evaluated.

T/RS 132
Symbolic Dimensions of Faith 3 credits
This course is designed to explore the universal symbols that have emerged from the collective experience of mankind, and which man has employed in his attempts to communicate with God, particularly in the Judaic-Christian tradition.

THEOLOGY/RELIGIOUS STUDIES MAJOR

	Dept. and No.	Descriptive Title of Course	Credits FALL	SPRING
		FRESHMAN		
MAJOR	T/RS 6-Elective	First Year Electives	3	3
COGNATE	Elective	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Elective		3
GE AREA II	Social/Behavior	Elective	3	
GE AREA III	Communications	Electives	3	3
GE AREA V	Phil. 20	Introduction to Philosophy		3
GE FREE	Intd.	Interdisciplinary Elective	3	
PHYS EDUC	Ph. Ed. 1-2	Basic Physical Education	1	1
			16	16
		SOPHOMORE		
MAJOR	T/RS	Second Year Electives	3	3
COGNATE	Elective	Electives	3	3
GE AREA I	Nat. Sci./Quant.	Electives	3	3
GE AREA II	Social/Behavior	Electives	3	3
GE AREA III	Communications	Elective	3	
GE AREA V	Phil. 110	Ethics		3
PHYS EDUC	Ph. Ed. 23-24	Advanced Physical Education	1	1
			16	16
		JUNIOR		
MAJOR	T/RS	Electives	6	6
COGNATE	Electives	Electives	3	3
GE AREA II	Social/Behavior	Elective	3	
GE AREA IV	Humanities	Electives	6	6
			18	15
		SENIOR		
MAJOR	T/RS	Electives	3	3
COGNATE	Electives	Electives	3	3
GE AREA IV	Humanities	Electives	3	3
GE AREA V	Philosophy	Philosophy Electives	3	3
GE FREE	Electives	Electives	3	3
			15	15

TOTAL: 127 credits

T/RS 135

Issues in Contemporary Theology 3 credits

This course focuses on several of the more important questions asked of theology today, particularly those relating to the person and work of Christ and the nature and function of the Christian Church.

T/RS 138

Jesus: Mystery and Revelation 3 credits

This course will focus on the contemporary quest to articulate an understanding of the mystery of Jesus. After an initial examination of the Gospels and Acts of the Apostles in the light of modern biblical criticism, attention will center on three questions about Jesus: his ethical teaching, his identity, and his meaning for today.

T/RS 140

Jewish Theological Thought 3 credits

The nature, creeds, and institution of Judaism. The God Concept, Man and His Will, the Nature of the Good, the Destiny of Man, the Shadow of Sin.

T/RS 141

The Protestant Faith 3 credits

An inquiry into the way a Protestant thinks theologically. Problems of myth, truth, authority arising from modern Biblical Criticism. Roots and principles of Protestant thought on the doctrine of God, nature of the Church, Christology, Eschatology, and Ethics.

T/RS 144

Ideas and Ideals of Hebrew Scripture 3 credits

Biblical teaching seen as a revolution against

contemporary cultures and moralities. The Bible as process, exhibiting development and change in a world outlook, ethical ideals and ritual. The question of the "who" and "when" of biblical authorship. The Bible as a cultural force, influencing all languages, poetry, music, painting and sculpture. The "truth" of Biblical selections; differences between scientific, historic, mythical and ethical truth.

T/RS 145
Theology of the Holocaust 3 credits
A course dealing with historical, religious and psychological elements of the Holocaust. The course will treat the writings of many of the contemporary theological thinkers in their treatment of man's inhumanity to man. The course will treat both Christian and Jewish theological responses to the Holocaust. The problem of evil in the universe will be analyzed in the framework of the Holocaust.

T/RS 150
The Church and Contemporary Issues 3 credits
Explores the religious and ethical dimensions of social issues such as prejudice and violence. The findings of related social sciences and literature are placed in the context of Christian anthropology to give the student a concrete view of their interrelationship.

T/RS 152
Theology and Science 3 credits
An inquiry into the theological implications of the scientific view of the human person. Special concern will be given to a study of method and interpretation in each area. Readings will be chosen from the current literature in theology, the social and physical sciences.

T/RS 155
The Place of Ethics in Politics 3 credits
Today there is much discussion about the importance of maintaining ethical standards in the conduct of political affairs. This course will attempt to shed light on this problem by studying the writings of major political and religious thinkers. Readings will be drawn from the Bible, Plato, Augustine, Machiavelli, Marx and the encyclicals of John XXIII and Paul VI.

T/RS 156
Church and State 3 credits
This course discusses the reasons for the separation of Church and State in the United States and explores the Church-state problems which have arisen under the religion clauses of the First Amendment. It also investigates the Catholic Church's views on Church-state relations, on the states's role in promoting human rights and social justice, and on the contribution of religion to the political order.

T/RS 157
The Church, Social Justice and Human Progress 3 credits
This course will explore the thought of recent social encyclicals and other Church documents on such topics as life, liberty, equality, human rights, public morality, justice among nations. Attention will also focus on several theologians who have reflected on the political order and human progress, including John Courtney Murray and Reinhold Niebuhr.

T/RS 158
Perspectives on Western Culture 3-6 credits
This course will provide students with an opportunity to study the writings of major thinkers in the Western religious, philosophical, political and literary traditions. The subject matter of the first semester may be divided into four parts: (1) classical thought (2) Hebrew Scriptures (3) early Christian literature and thought (4) the medieval period. The second semester is listed as Phil. 159.

T/RS 159
Religion and the American Dream 3 credits
American Social perspectives, civic religion and national priorities under the theological looking glass. A Judaeo-Christian reflection on the nation's religious vision.

T/RS 160
Religion in America 3 credits
Religion as philosophy of life, attitude, tradition and organization, with special reference to the American scene. The history and thought of various religious groups. Some contemporary issues, such as Church and state, ecumenism.

T/RS 165
Christian Ethics in the Modern World 3 credits
This course will discuss the practice of the Christian moral life in contemporary society. The Christian virtues will be distinguished and related to selected problems arising in our lives as private individuals, as members of families, as professionals and as citizens. Other topics to be treated include: evil, sin, Christian liberty, Christian perfection, relativism and humanism.

T/RS 167
Theology of Liberation 3 credits
Liberation Theology represents a recent development of major importance within

Roman Catholicism. Originating in the "third world" countries, particularly of Latin America, its purpose is to engender a faith inspired commitment to liberation from oppressive social, political and economic structures by viewing these structures in the light of the gospel and tradition of the Christian community.

T/RS 170
Theology of Love and Marriage 3 credits
Natural and supernatural meaning of love. The theology of vocation, the secular meaning, sign and celebration of Christian matrimony, and the implications for Christian perfection in the calling to marriage and family life.

T/RS 171
Theology of Sexuality 3 credits
The nature and meaning of sexuality. The scriptural and Patristic sources. Contemporary insights into sexuality as a quality of the human person. A theology of sexuality with its moral and attitudinal implications for the pre-marital, marital and celibate states.

T/RS 175
Norms for Christian Decision 3 credits
A foundational course in Christian ethics which analyzes principles through basic questions. Is there a precisely Christian value system, a Christian rationale for ethical choices? Does this agree, compare, contrast with other systems? How does a Christian specify loving action? What is the role of conscience? How does the Christian attain the ability to make new values, repair failures, renew effort, reverse malice?

T/RS 177
Theology and the Life Sciences 3 credits
Theological values in human life; divine plan in the natural environment. Problems posed to theology in ecology, population growth, abortion, sterilization, euthanasia, genetic technology, insemination, organ transplants, sex transformation, character change through drugs, etc.

T/RS 178
Theology and the Global Village 3 credits
". . . to save succeeding generations from the scourge of war . . . to reaffirm faith in fundamental human rights," from the United Nations. A theological reflection on the goals and rights of the U.N. Charter; the responsible Christian in an interdependent world.

T/RS 179
Peace Theology and the Arms Race 3 credits
An examination in depth of the growing Christian conviction that "true and lasting peace cannot be based on the power of destructive weapons or the static tension of conflicting ideologies" (Paul VI). Violence as part of the human condition. Viable alternatives to military weapons. A theology of peace relevant to these times in which humankind can instantaneously end civilization as we know it.

T/RS 180
Introduction to Biblical Exegesis I 3 credits
The individuals, history and literature of the Old Testament, with special emphasis on ancient Near East environment, and the relation of this literature to the biblical books.

T/RS 181
Introduction to Biblical Exegesis II 3 credits
An examination of the discipline of Old Testament theology. Critical and exegetical study of selected writings in the Bible, Biblical criticism.

COMMUNICATION ELECTIVES FOR AREA III OF GENERAL EDUCATION PROGRAM

A. Elementary and Intermediate Languages
B. Computer Science 20, 21, and 25.
C. Education 103-105, 107
D. Applied Fine Arts courses: Art 121-122
E. PHIL. 28, Logic
ENGL. 2, Oral Communication
ENGL. 7, Writing Center
ENGL. 113, Logical and Rhetorical Analysis
ENGL. 114, Argumentation and Debate
ENGL. 123, Workshop in Writing
ENGL. 125, Strategies for Teaching Writing
ENGL. 124 Creative Writing
ENGL. 127, Teaching Modern Grammars
COMM. 12, Advanced Composition
COMM. 117, Broadcast Programming
COMM. 118, Educational Television
COMM. 119, Intro. to Journalism
COMM. 120, Advanced Journalism: Newspapers
COMM. 121, Broadcast Journalism
COMM. 122, Sports Information Seminar
COMM. 128, Television Production
COMM. 161, Theater Practicum
COMM. 173, Public Relations
COMM. 174, Dramatic Writing

INTERDISCIPLINARY COURSES

INTD. 1
Civilization: Art and Architecture as a Reflection of History 3 credits
Prof. Beverly Black, Lecturer in Fine Arts, and Fr. Scott, S.J., Prof. of History
Media presentations in slides and film of painting, sculpture and architecture in earlier civilizations as indicators of the nature of the society and of its historical development.

INTD. 2
The Problem of Alienation in French and American Literature 3 credits
Dr. Petrovic, Prof. of French; Dr. Jordan, Dept. of English
A comparative study of alienation as theme in contemporary American and French literature through reading, discussion, and analysis of such masterpieces as: Hemingway's *The Sun Also Rises*, Salinger's *Catcher in the Rye*, Miller's *Death of a Salesman*, Camus' *The Stranger*, Mauriac's *Therese Desqueyroux*, Gide's *The Immoralist*.

INTD. 3
The Nature of Nature 3 credits
Prof. Fahey, Dept. of Physics; Dr. Fairbanks, Dept. of Philosophy
An approach to the Physical Sciences which gets away from the "hard" science mathematical approach and instead looks at the effect of science on man and his environment. A better knowledge of the impact of science on man is gained by looking at the development of science from an historical point of view. Team-taught by physics and philosophy department; includes some laboratory demonstrations.

INTD. 6
Rhetoric of Politics 3 credits
Dr. Homer, Department of History; Prof. Warner, Dept. of English
An investigation into the use and influence of rhetoric in modern politics. Case studies chosen from political leaders of the 20th century, both in the U.S. and Europe.

INTD. 8
Dissent of the Intellectuals in Communist Society 3 credits
Dr. Capestany, Dept. of Philosophy; Dr. Parente, Dept. of Political Science
A study of literary dissent by intellectuals in communist political systems. East European, Soviet and Chinese problems discussed. Nobel Prize winner Solzhenitsyn's writings, as well as those of Djilas and other Eastern writers, are covered.

INTD. 9
The Pursuit of Justice 3 credits
Department of Political Science and Religious Studies.
Analysis of the concept of Justice from moral and socio-economic points of view. Consideration is given to a definition of Justice, followed by an examination of attempts to institutionalize the ideal in American society. International problems are also analyzed.

INTD. 13
Man: Sunrise or Sunset? 3 credits
Dr. Zahler, Prof. of Drama; Dr. McGinley, Prof. of Philosophy
Probes the motivations of Man's Behavior. Through analysis of Plato's *Phaedo* and Sophocles' *Oedipus Rex*, the hidden motives that drive men to greatness or disaster are explored. Aristophanes' *The Clouds* takes a light-view of philosophers and is the comic relief in the course. Nietzche's philosophy of the conflict between the Dionysian and Appolonian dimensions of man's nature is studied along with Euripides' *The Bacchae*. The concept of perfect man in Shaw's *Caesar and Cleopatra* and dehumanized man in Rice's *The Adding Machine* is also studied.

INTD. 17
Great Lives: Images on Stage and in History 3 credits
Dr. Homer, Prof. of History; Dr. McInerney, Prof. of English
An examination of the often contrasting impressions of historical personalities, as they are portrayed in plays and films and as they appear to historians. Historical figures to be considered include Caesar, Richard III, Thomas More, Lincoln and Churchill.

INTD. 18
Sexism in American and European Literature 3 credits
Departments of Foreign Language and English
Study of women in stereotyped roles: sex object, submissive wife, mother, old maid, liberated women. Analysis of French and English literature in particular. Class discussions based on assigned readings and student reports on related topics.

INTD. 19
The Moral Significance of the Holocaust 3 credits
Team taught by Department of Philosophy and Miss Sheila Weinberg of Scranton/Lackawanna Jewish Council.
This course examines the extermination of six million Jews by the Nazis during World War II and the questions that this act of genocide raises about men and nations in the 20th century.

INTD. 20
The Dynamics of World Hunger 3 credits
Multidisciplinary.
Taught by a team of faculty from a half dozen different departments.
This course focuses on the national and international problem of hunger and the question of adequate food resources. The politics of food, production and economics of food are discussed. Different solutions to the food problem as practiced in different countries are evaluated from the standpoint of ethics and utility.

INTD. 21
Energy, Environment, Economics: An American Dilemma. 3 credits
Science & Business departments.
The physical nature of energy and the problem of America's demand for energy—fuel oil, electricity, atomic power—versus political and social pressure to conserve and redeem our environment. The economic realities of the Energy Problem.

NATURAL SCIENCE 1
The Nature of Nature 3 credits
(See description above for Intd. 3)

NATURAL SCIENCE 101
Science and the Human Environment 3 credits
A brief study of the effects of the technological, scientific and industrial progress on the air, land and water resources of the human environment. Problems in each of the resource areas will be discussed in some detail. This course is conducted on a lecture-demonstration basis.

En/P 189
The Fragmented World 3 credits
Dr. Gougeon, Dept. of English; Dr. Nordberg, Dept. of Philosophy
Through the study of English literature and the philosophy of the 17th century, this course investigates the collision of two world views: the Elizabethan and that of the New Science. Fragmentation of homogeneous traditional values and the struggle to reconstruct a valid world view responsive to the needs of the human condition. English or Philosophy credit or Area IV Humanities.

OUTSIDE THE CLASSROOM

OUTSIDE THE CLASSROOM

As any high school graduate knows, much of a student's education takes place outside the classroom. This is true also at the University level. At the University of Scranton, much of the formal academic learning process takes place off the campus in the various internship programs as well as on the campus in traditional extracurricular activities. In many instances, these activities merit and receive academic credit.

DRAMATICS

The tradition of the theatre and dramatics in Jesuit colleges goes back four hundred years. As evidenced by the recent award of the Pulitzer Prize in Drama to Jason Miller, a 1961 graduate (AB English) of the University, in Scranton this tradition thrives. With increasing frequency, students are writing and staging their own dramatic productions, often for academic credit in English and Communication, or in place of the traditional course term paper. In recent years, students have written and directed such original productions as *White Buffalo,* which dealt with the theme of student protest, and *Then Sounds the Trumpet,* a historical drama about the 1944 assassination attempt on Hitler and which merited for its student authors the National Catholic Theater Conference Medal. Students have also directed adaptations of Peter Ustinov's *Beyond* and Shaw's *St. Joan.*

Recently, first or second year students have composed a musical adaptation of Shaw's *Overruled* and a musical rock version of Shakespeare's *As You Like It,* which was then presented on Public Television. Other students have earned academic credit through summer theatre performances in the Pocono Mountain resort area or through playwriting for University productions.

Beyond these individual efforts, THE UNIVERSITY PLAYERS each year present several dramatic productions. Recent productions of the Players include *1776, Of Thee I Sing, The Time of Your Life,* John Osborne's *Look Back in Anger,* Peter Schaffer's *Black Comedy,* Tennessee Williams' *Cat on a Hot Tin Roof,* Ben Johnson's *Alchemist,* Shakespeare's *Taming of the Shrew, Henry V, and Hamlet,* Moliere's *Imaginary Invalid,* and Edward Albee's *Who's Afraid of Virginia Woolf.* Annually, undergraduate students are given the opportunity to direct some of productions. In recent years students directed *A Thousand Clowns.* Arthur Miller's *The Crucible,* Neil Simon's *Last of the Red Hot Lovers,* Thornton Wilder's *Skin of Our Teeth,* and an original play, *The Elders.*

Jason Miller '61, AB in English, Oscar nominee for his role as Fr. Karras, S.J., in "The Exorcist," winner of the New York Drama Critics' Award, "Tony" Award, and the 1973 Pulitzer Prize in Drama for his "The Championship Season."

ATHLETICS

INTERCOLLEGIATE SPORTS

The University is a member of the National Collegiate Athletic Association; the Eastern Collegiate Athletic Association; the Middle Atlantic Conference, the Middle Eastern College Athletic Association and the Northeastern Pennsylvania Women's Intercollegiate Athletic Association. A complete program of intercollegiate men's and women's sports is directed by the Athletic Department.

MEN'S VARSITY SPORTS		WOMEN'S VARSITY SPORTS
Basketball	Cross Country	Field Hockey
Baseball	Golf	Tennis
Tennis	Soccer	Basketball
Wrestling	Rifle Team	Volleyball

BASKETBALL

Under the leadership of head coach Bob Bessoir and assistant coach Mike Strong, the varsity Royals won the NCAA Division III national championship in 1976 and took third place in this division in 1977 compiling records of 27-5 and 24-8 respectively. The team has also won its Divisional Championship in the Middle Atlantic Conference in two of the last three years. This record includes victories over Army, Lehigh, Bucknell, Amherst, Kings, Wilkes, LeMoyne, and St. Francis of Brooklyn.

NCAA Division III Champions, 1975-76.

CLUB FOOTBALL

A very active Club Football team also exists at the University of Scranton. Scheduled are games with such schools as American University and Federal City College of Washington, D.C.; Rutgers University at Newark, Niagara University, and King's College.

INTRAMURALS AND PHYSICAL EDUCATION

A year-long intramural program is in operation both in the John J. Long Center and outdoors. For the additional sports available in the physical education program, see the description given in the Departmental listing earlier in this bulletin.

ROYALS' HISTORICAL SOCIETY

Recipient of the Best Club of the Year Award in 1969-70, 1972-73, and 1973-74, this association of students and faculty is devoted to enhancing the study of history outside the classroom. Recent activities included field trips to wineries in the Finger Lakes region, to the Corning Glass Museum, and to New York City museums. Additionally, the club brings diplomatic visitors to the campus as well as travelling to consulates in New York City, Washington and to the United Nations. The club also publishes *Retrospect,* a journal of student and faculty essays in the historical field.

Gov. William Scranton, U.S. Ambassador to the United Nations, greeting Royals' Historical Society members at the U.N. in New York City.

HUMAN RESOURCES ASSOCIATION

A departmental club organized by the students and faculty of the Human Resources Department, this group won the Club of the Year Award for 1974-75. It sponsors social events such as bowling, dances, picnics as well as a newsletter, *HRA Review,* symposia dealing with problems in the professions of helping and volunteer work with several public and private agencies.

DEBATE

The tradition of debate in Jesuit colleges and high schools is also strong at the University of Scranton. The Noel Chabanel Council of Debate gives interested students an opportunity to compete in debate and speech events on the intercollegiate level. University of Scranton debaters travel thousands of miles each year, competing in tournaments as far north as Cambridge, Massachusetts, as far south as Miami, Florida, and as far west as Los Angeles.

PUBLICATIONS

The University offers a wide choice of journalism opportunities. The *Aquinas* is the campus newspaper and positions are available to members of all classes. The *Esprit* presents the student option of the campus in fine literary form. *Esprit* is the award-winning campus literary journal. History students have the opportunity to have their articles published in *Retrospect.* The yearbook, *Windhover,* is annually produced by the students.

HORTICULTURE CLUB

Winner of the 1975-76 Club of the Year Award, this group of Biology, Chemistry and other interested students among other activities, renovated the old Scranton Estate Greenhouse for utilization by the science faculty and students in experiments. The club also visited the Brooklyn Botanical Gardens and the Longwood Gardens in Delaware.

THE UNIVERSITY SINGERS

The Singers bring the musical voice of the University to other college campuses and high schools, as well as performing at campus events.

OTHER CLUBS

Political Science Club
Ski Club
Photography Club
Sociology Club
Spanish Club
Hockey Club
Computer Science Club
Women's Club
Veteran's Club
India Club
Biology Club
Philosophy Forum
Student Education Association
Society for Advancement of Management
Royal Rifles
Psychology Club
Business Club
Schrodinger Chemical Society
International Students Club
Young Democrats
Young Republicans
Campus Bowl
Fall Revue
ROTC Commandoes

STUDENT SERVICES

STUDENT PERSONNEL — THE VICE-PRESIDENT in cooperation with his staff members directs the various student services, plans and coordinates all activities and services in non-instructional areas: e.g., housing, health, activities, food services, placement. THE DEAN OF STUDENTS has a special responsibility for assisting students in the Residence Halls and providing assistance in the area of student conduct.

Fr. Tom Masterson, S.J.
Director of Campus Ministries

CAMPUS MINISTRY — As a Catholic institution the University of Scranton is dedicated to promoting continued growth in personal maturity and freedom, especially as religious believers and persons dedicated to service of the human family. The specifically spiritual ministry of the entire University community is coordinated by the Office of Campus Ministries assisted by the Jesuits, other clergy, University staff members and students themselves.

Frequent daily and Sunday liturgies and other special services are conducted in the chapel and in dormitories in which the community both expresses and deepens its religious vision. Faculty and students join both in the planning and in conducting these worship services. The Sacrament of Reconciliation is celebrated both communally before important festivals and individually before daily Masses, or by request.

Spiritual counseling is available from the staff or Jesuits, especially the DORMITORY COUNSELORS. These make available their training, experience and friendship to promote greater self awareness, maturity, integration and ability to pray, as well as to identify obstacles to these and other goals.

Persons seeking a period of stillness, directed prayer or an experience of Christian community are invited to participate in frequent programs at nearby Chapman Lake. Campus Ministries also sponsors lectures and discussions on vital issues, organizes special events to heighten religious awareness, assists in services to the larger community and is responsible to act as spokesman for justice within the University. Students of non-Catholic faiths are encouraged to help plan an expansion of services to themselves.

COUNSELING CENTER — Staffed by professionally trained personnel, with over 50 years combined college counseling experience, this department serves the students, the Chaplain, the faculty and the administration. It provides counseling service on educational, vocational and personal matters. Students are tested and counseled on their aptitude for college work, study habits, their correct placement in the curriculum, and their reading techniques.

The center would have the student ask himself: "Now that I'm in college, where do I go? Do I really understand my choice of major? What other majors are open to me? The center can help answer these questions. It is located in Room 401 of St. Thomas Hall. Prof. Cannon, Mr. Beckish, Miss Kopcik and Fr. Lange are

readily available to counsel any student with educational or personal problems. The Director and Assistant Director are licensed by the Commonwealth of Pennsylvania to practice clinical psychology. Interviews are on a voluntary basis and may be arranged through the Center's secretary. There is no charge for this service which is covered by your University fee.

CONCERT AND THEATRE SERIES

The University annually presents a Concert and Theatre Series for the enrichment of the local and college community. Recent presentations have been marked both by the excellence and diversity of the performances: "Tosca," presented by the Goldovsky Grand Opera Theatre of New York; the Philadelphia Chamber Soloists; The Czechoslovakian Pantomime National Theatre of Prague; the National Shakespeare Company of New York; Ars Antiqua de Paris; the Group Motion Media Theatre of West Berlin; the Pennsylvania Ballet; the African Heritage Dancers and Drummers of Washington, D.C.; the Lucarelli-Hillyer Ensemble; pianists Robert Silverman from Canada and Nina Sapiejewska from Warsaw; Sartre's "No Exit" by the Lyric Players of New York; Jacques Loussier Trio of Paris; the Yugoslavian Gypsy Folk group, Tzigane; The Curtis Chamber Trio of Philadelphia; The Canadian Brass of Toronto; and the Ballet Nacional De Espana.

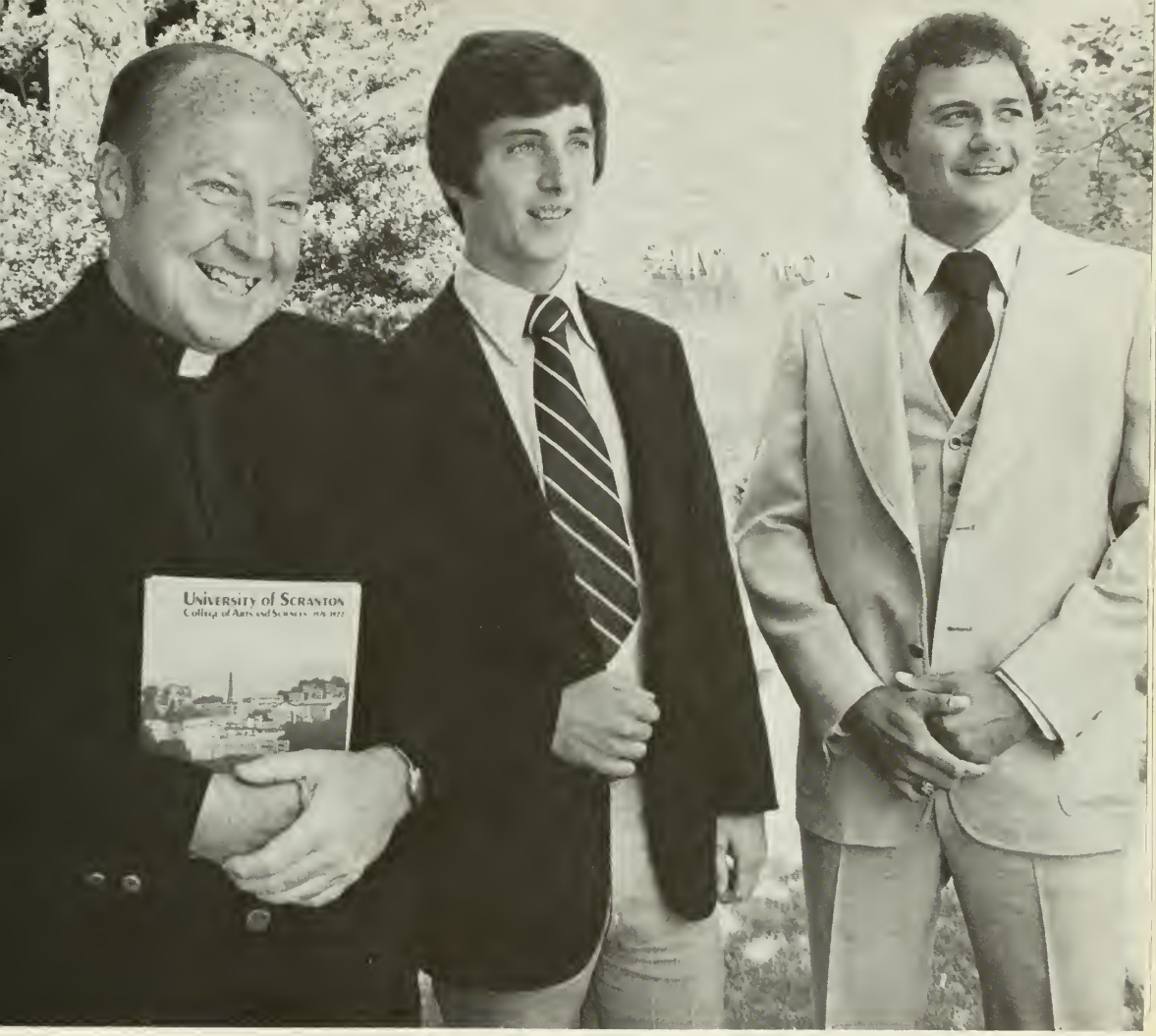
ALUMNI ASSOCIATION — Typical of a school which is virtually youngest among the Jesuit universities of the world is the coordination of young and old members of the University community in the Alumni Society. Atty. Peter Loftus was recently elected President of the National Alumni Society, while Dr. Frank O'Hara '25 serves as Moderator. Alumni officers speak at various student functions from freshman orientation to commencement ceremonies inducting students into the Society four years later. Together the 15,000 Alumni of the University have raised over $3,000,000 in the Annual Giving Campaign since 1955.

READING CLINIC — To assist students in correcting reading weaknesses and improving proper skills, the University's Reading Clinic under the direction of Prof. John Williams is made available. A non-credit Developmental Reading course is offered. It concentrates on such areas as comprehension, word attack, speed, critical reading and analysis, research and study techniques. There is a $50.00 fee.

OFFICE OF CAREER SERVICES — This office under its Director and through departmental advisors exists to encourage and advise seniors seeking admission and/or financial aid to graduate and professional schools, to keep students posted on test deadlines, admission deadlines and other pertinent data, and to type letters of recommendation to graduate and professional schools.

This office also serves undergraduates and alumni as a placement service for immediate post-graduation employment. Officers of large corporations and local employers arrange through the Office of Career Services to visit the University to interview seniors for positions with their organizations.

OFFICE OF CONTINUING EDUCATION — A primary agent in the University's effort to bring its resources to the people of Northeastern Pennsylvania, this office under its Director, Victor J. DeSantis, provides educational opportunities to adults who are unable to study full time or in residence. Through its Program of Lifelong Learning (PLUS), it offers a variety of programs: 1) Assessment of Experiential Learning, a program whereby students are awarded credit toward a degree based upon competencies learned in non-collegiate settings; this includes CLEP, military courses, and credit by examination. 2) Conferences and Institutes as public service programs arranged for special groups of professionals in a specific area. 3) Certificate programs for a series of courses in a specific area; e.g., real estate, small business operation, accounting, health care management, etc. 4) Non-credit courses used as refresher programs for additional background before beginning college or for professionals in upgrading skills or qualifying for a license, as well as public-service type offerings.



admissions, expenses, financial ai

ADMISSION

The Admissions Committee of the University of Scranton will make the final decision on applications for admission. In reaching this decision, the committee will consider the following:

The high school record—both the student's relative standing in class and the program followed.

The scholastic aptitude test scores.

The recommendations of teachers, guidance counselors, and the principal.

The student's character, personality, and leadership potential.

Admissions standards and policy are free of discrimination on grounds of race, creed, color, and national origin. The University recognizes both its legal and moral obligations to fulfill the requirements of Title VI of the Civil Rights Act of 1964 and to conform to all applicable laws and regulations.

STEPS IN MAKING APPLICATION

Request for an application form and all correspondence dealing with admission to the College of Arts and Sciences or to the School of Management should be directed to: THE DIRECTOR OF ADMISSIONS, UNIVERSITY OF SCRANTON, SCRANTON, PENNSYLVANIA 18510. Telephone: (717) 961-7540.

A non-refundable fee of $15.00 should accompany the application.

Students should apply during the first semester of their senior year of high school. July 1 is the final date on which applications for Fall term admission will be accepted.

The first two parts of the application form should be completed and the entire form given to the registrar or principal of the high school who will record the high school grades and return the form with his recommendations to the University.

The Scholastic Aptitude Tests are required of all applicants. These tests should be taken during junior year and/or in November, December or January of senior year. Achievement Tests are not required. Arrange for these tests by contacting your high school guidance counselor or by writing to: The College Entrance Examination Board, Box 592, Princeton, New Jersey 08540.

A non-refundable class reservation fee of $25.00 is required of all accepted applicants. In addition, accepted resident freshmen will make a non-refundable room deposit of $50.00 upon notice from the Director of Admissions.

REQUIRED HIGH SCHOOL PREPARATION

Students desiring to enroll in any of several undergraduate programs offered by the University must have completed a total of 16 or more high school academic units covering grades 9-12. The term "unit" means a high school course taught four or five hours weekly throughout an academic year of 36 weeks duration. Unit requirements and preferred distribution of secondary courses are given in the following table:

HIGH SCHOOL UNITS	COLLEGE PROGRAM CHOICE					
	Arts		Science or Engineering		Business, Education or Social Science	
	Req.	*Pref.*	*Req.*	*Pref.*	*Req.*	*Pref.*
English	4	4	4	4	4	4
History & Social Science	2	3	2	3	2	3
Foreign Language	2	2+	2	2+	2	2+
College Preparatory Mathematics	3	4	3	4	3	4
Science	1	2+	1	3+	1	2+
Other acceptable units	4		4		4	
TOTAL	16+		16+		16+	

Applicants without high school credit in modern languages may be accepted if they present 16 acceptable units. A single year of language in high school will not be counted as a unit to satisfy the requirements for admission.

Mathematics includes elementary, intermediate, and advanced algebra, plane and solid geometry, trigonometry, analysis, and any other college preparatory course. Applicants for science and engineering programs must include trigonometry and must have maintained an 85% average in each mathematics course.

Science includes biology, chemistry, physics, and other college preparatory courses. Pre-engineering applicants are urged to include physics in their high school preparation.

Other acceptable high school units may be chosen from any of the following:

Ancient History
Medieval History
Modern History
Civics
Economics
Problems of Democracy
Greek, Latin
Modern Foreign Language
College Preparatory Mathematics
Science
Psychology

REQUIRED OF ALL APPLICANTS

WHAT	APPLY TO WHOM	WHEN
Application Form	Director of Admissions	End of Junior year start of senior year
High School Record	Principal (to be sent to the Director of Admissions)	End of junior year, start of senior year.
Scholastic Aptitude Test	College Entrance Examination Board, Box 592, Princeton, New Jersey 08540	November, December, or January of senior year

Arrange to have all test scores sent to the Director of Admissions, University of Scranton.

At its meeting of December 15, 1976, the Board of Trustees approved the addition of the following statement to the University of Scranton's By-Laws:

> "The University of Scranton admits students of any race, color, national and ethnic origin, religion, or sex to all the rights, privileges, programs and activities generally accorded or made available to students at the University of Scranton, and does not discriminate on the basis of race, color, national, and ethnic origin, or religion in the administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other University-administered programs. It complies fully with the prohibitions against discrimination on the basis of sex contained in Title IX of the Educational Amendments of 1972. In employment of both students and staff the University of Scranton is an Affirmative Action and Equal Opportunity Employer."

Advanced Placement
Academic Development Program
Transfer Students

ACCELERATION AND ADVANCED PLACEMENT

Applicants who have taken college level courses may be given advanced placement or advanced placement with credit for these courses. Students who have been accepted for admission and desire to apply for such placement must take the Advanced Placement Examination offered in May by the College Entrance Examination Board, Princeton, New Jersey 08540. Ordinarily a score of "3" or better in this examination will insure advanced placement with credit.

SPECIAL ACCELERATION PROGRAM

A special acceleration program is available for outstanding high school students of the Scranton area. These students are recommended by their high school during their junior year and take courses at the University during the summer months and senior year. Through this program it is possible for a student to enter the University as a sophomore. For further details contact the Director of Admissions.

COLLEGE LEVEL EXAMINATION PROGRAM

Through the CLEP tests, applicants may gain college credit in most academic subjects for work done outside the classroom in jobs, military service, etc., or in non-accredited institutions. For further information contact: College Level Examination Program, Box 1824, Princeton, New Jersey 08540. Students wishing to be considered for CLEP credits should take the CLEP examinations and have the results forwarded to the Director of Admissions.

ACADEMIC DEVELOPMENT PROGRAM

Applicants who fail to meet all of the admission requirements may be considered for a special freshman year Academic Development Program. This concentrates on English, logical thinking, reading skills, study habits, as well as work in the student's major field. Satisfactory completion of this program will insure the applicant normal sophomore standing.

TRANSFER STUDENTS

At the discretion of the Admissions Committee, students from another accredited college may be admitted provided: (1) The courses to be transferred are equivalent to courses offered at the University of Scranton; (2) the academic average of the candidate is "C plus" (2.5) or better; (3) certification of honorable dismissal is presented from the previous college. No credit will be given to courses with grades less than "C". Students transferring from other institutions shall be required to make up curricular subjects prescribed in the course which they are to follow at the University of Scranton. A minimum of 52 credits at the University of Scranton is required of transfer students for degree eligibility. Special orientation sessions are held for transfer students.

STUDENT EXPENSES

ACADEMIC YEAR 1977-78

The University's per credit tuition rate is among the lowest of any private college in America. The University is pledged to continue its effort to make available to as many as possible the benefits of quality, private education.

Tuition per credit	$ 65.00

SPECIAL SERVICE FEES

Late Registration Fee	15.00
Change of Schedule after First Day of Classes	10.00
Change of Major Fee	10.00
Certified Transcript (per copy)	
Currently Matriculated Students	1.00
All Other Requests	2.00

ORDINARY FEES

University Fee, per semester	60.00
The University Fee is applied as follows:	
Student Center Membership Fee $30.00	
Athletic Fee 15.00	
Student Activity Fee 15.00	
Continuation Fee (in lieu of University Fee for students not in residence), per semester	5.00
Reader (Independent Study) Fee	75.00
Biology, Physics, CMPS Laboratory, per course per semester	40.00
Chemistry Laboratory, per hour per semester	10.00
Science Demonstration Fee, per course per semester	10.00
Business Laboratory, per semester	15.00
Statistics Laboratory, per semester	10.00
Computer Use Fee, per semester	30.00
Education and Psychology Laboratory, per semester	20.00
Language Laboratory, per semester	10.00
Film Screening Fee, per course	10.00
Breakage Fees	Actual
Parking Fee	5.00
I.D. Photo Fee	1.00
FOR SENIORS ONLY	FOR FRESHMEN ONLY
Graduation Fee $55.00	Orientation Fee 20.00

FOR RESIDENT STUDENTS ONLY—ROOM & BOARD

3 meal plan (per semester)	725.00
Infirmary Fee (per semester)	10.00
Damage Deposit	25.00

Incoming resident students are required to pay a $25.00 room damage fee. The room damage fee will be paid only once by each resident student and will be refunded in full (or in part if any claims are made against the fee) upon the student's graduation or official withdrawal from school.

Fees listed for residence facilities do not cover the times of calendar vacations. Students are expected to vacate their rooms at these times.

The University offers each of its undergraduate students the opportunity to enroll in an attractive health insurance plan at the outset of each academic year. Although they are not required to enroll in the University sponsored health plan, all resident students must demonstrate that they have adequate health insurance before they will be allowed to reside in University housing units.

Tuition and fees are payable in advance upon registration. Registration is to be completed **by mail** by late August for the fall semester and by late January for the spring semester. Without exception, the Laboratory Fee must be paid in all courses having a laboratory requirement.

No student shall be permitted to receive any degree, certificate, or transcript of record, until his financial account with the University has been satisfactorily settled.

MONTHLY PAYMENTS

The University does not accept installment payments directly, but does facilitate this arrangement through two professional agencies: Academic Management Services, 170 Broadway, Pawtucket, Rhode Island 02860 and Educational Fund, Inc., Suite 3200, Prudential Plaza, Chicago, Illinois 60601. Brochures are mailed to parents of all incoming students in May of each year by the Director of Financial Aid.

REFUNDS

When a student leaves the University without completing the semester, he may not demand a refund as a matter of right. If, however, his withdrawal is authorized for a good cause and he has honorable dismissal, he may request in writing a refund of tuition, board and room fees. Ordinary and special service fees are not refundable. The schedule of refunds is listed below. Students withdrawing from individual courses are eligible to receive credit on their account with the University. The schedule below is also applicable to this situation.

PERIOD OF ATTENDANCE	CREDIT
FALL SEMESTER	
To September 14	100%
To September 21	75%
To September 28	50%
To October 5	25%
Beyond October 5	no refund
SPRING SEMESTER	
To February 15	100%
To February 22	75%
To March 1	50%
To March 8	25%
Beyond March 8	no refund

FINANCIAL ASSISTANCE

The University desires to help as many qualified students as possible to complete a college education. For this purpose the University maintains an Office of Financial Assistance and all inquiries concerning such assistance should be made to the Director of Financial Aid.

PROCEDURES FOR APPLYING FOR FINANCIAL AID

1. Respond to the questions on the Admissions application relative to financial aid.
2. Complete the Financial Aid Form and forward it to the College Scholarship Service before February 15th. The University code number is 2929. Copies of the Financial Aid Form can be obtained from the College Scholarship Service, Box 176, Princeton, New Jersey 08540.

Ordinarily to be eligible for financial aid, a student must be classified as full time, i.e. carrying a minimum of 12 credits per semester. The following financial aid programs are available:

LOANS:

The University administers the National Defense Student Loan Program in accordance with the National Defense Act of 1958. The Financial Aid Form is required of all loan applicants.

Individual state loans are also available. Applications for these loans must be secured from the participating banks in the student's home town.

Pennsylvania residents may borrow up to $2500 a year from the State Guaranteed Student Loan Program of the Pennsylvania Higher Education Assistance Agency (PHEAA).

OTHER PROGRAMS:

THE PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY has been designated by the General Assembly to administer the **State Scholarship Program.** A graduating high school senior may be awarded from $100-$1500 per year. Interested students should consult with their high school guidance counselor for full details and eligibility requirements.

SUPPLEMENTAL EDUCATIONAL OPPORTUNITY GRANTS, formerly Educational Opportunity Grants, established under the Higher Education Act of 1965 are awarded from federal funds through the college in amounts from $200-$1,000 per year to students from low income families. The Financial Aid Form is required for this program.

BASIC OPPORTUNITY GRANTS have been established under Title IV, Part A of the Educational Amendments of 1972. This program provides for grants in the amount of $1,600.00 less the expected family contributions of eligible students. Applications are available from institutions of higher education, high schools, libraries, post offices, and other locations easily accessible to students.

THE COLLEGE WORK-STUDY PROGRAM established under the Economic Opportunity Act of 1964 provides a number of jobs both on and off campus during the summer and academic year for students demonstrating a high degree of financial need. The Financial Aid Form is required of all applicants for this program.

VETERANS READJUSTMENT ACT OF 1966—Veterans should consult with their local V.A. counselor in order to establish their eligibility for participation.

U.S. ARMY ROTC SCHOLARSHIPS are available. Full details may be secured by contacting the Military Science Department.

THE BUREAU OF VOCATIONAL REHABILITATION under the Pennsylvania Department of Labor and Industry provides help to qualified students. Eligibility requirements should be discussed with a local service office.

CAMPUS EMPLOYMENT—In addition to jobs under the Federal College Work-Study Program, the University annually provides a number of jobs in various departments and administrative offices for qualified students. Students seeking campus employment must file the Financial Aid Form.

SCHOLARSHIPS:

Each year the University offers a variety of scholarships which range from full tuition Presidential Scholarships for outstanding high school seniors to partial scholarships which are granted on the basis of the student's scholastic ability and financial need. The University of Scranton participates in the College Scholarship Service and all applicants for scholarship aid must file a copy of the Financial Aid Form.

SCRANTON PREPARATORY SCHOOL SCHOLARSHIP

This four-year tuition scholarship, initiated in 1947 by the President and Board of Trustees of the University, is given annually to a graduate of the Scranton Preparatory School in honor of the following (the name of the scholarship, therefore, rotates from year to year):

THE MOST REV. WILLIAM J. HAFEY, D.D., SCHOLARSHIP — (1974-1978) to Alan P. Gillick

THE MOST REV. HENRY T. KLONOWSKI, D.D., SCHOLARSHIP — (1975-79) to Peter A. Cognetti.

THE REV. EDWARD BAXTER, S.J., SCHOLARSHIP — (1976-1980) to David Guarnieri.

THE MOST REV. MARTIN J. O'CONNOR, D.D., SCHOLARSHIP — (1977-1981) to Michael A. Whelan.

Selection of the recipient is on the basis of academic achievement, qualities of leadership, service to the Preparatory School, and recommendation of the Headmaster and Dean of Studies of the Preparatory School.

PRESIDENTIAL SCHOLARSHIPS

The *Presidential Scholarships* have been made possible by University support through unrestricted funds and, in part, by unfunded gifts made to the University by generous benefactors. These gifts are utilized as direct grants.

Noteworthy among these gifts are the significant amounts annually contributed by the Purple Club of Scranton. Since its founding in 1933, Purple Club contributions have totaled over $320,000.

Gifts made to the John C. Sawkulick Memorial Scholarship Fund have also helped provide Presidential Scholarships.

In addition, a scholarship for a pre-medical student in the amount of $200 is annually given by Dr. Joseph T. Evans, Chairman of the Department of Biology. Gifts have also been made in recent years to the John J. Dempsey III Memorial Scholarship Fund.

Annually, the University names five *Presidential Scholarships* in honor of distinguished alumni, friends of the University, and citizens of the Scranton area.

The names of the *Presidential Scholarships* and the recipients for 1974-78 are:

THE WILLIAM J. DEVLIN, S.J., SCHOLARSHIP — to Patrick W. Shea of Gettysburg, Pennsylvania (Delone Catholic High School).

THE HARRY DICKSTEIN SCHOLARSHIP — to Maurica R. Colbert of Teaneck, New Jersey (Academy of the Holy Angels).

THE HONORABLE T. LINUS HOBAN SCHOLARSHIP — to Thomas F. Bonhage of Havertown, Pennsylvania (Devon Preparatory School).

THE ERNEST D. PREATE, SR., SCHOLARSHIP — to Kathleen A. Fitzgerald of Utica, New York (St. Francis De Sales High School).

THE MONSIGNOR JOSEPH G. QUINN SCHOLARSHIP — to Mary B. Stahl of Scranton, Pennsylvania (Bishop Klonowski High School).

The names of the *Presidential Scholarships* and the recipients for 1975-79 are:

THE J. HAROLD BRISLIN SCHOLARSHIP — to Judith A. Yokaitis of Scranton, Pennsylvania (Central High School).

THE THOMAS J. FOLEY, ESQUIRE, SCHOLARSHIP — to David H. Mill of Honesdale, Pennsylvania (Honesdale High School).

THE REV. DEXTER L. HANLEY, S.J., SCHOLARSHIP — to Kenneth R. Petrini of Scranton, Pennsylvania (Central High School).

THE JAMES J. McGEE SCHOLARSHIP — to Peter M. Haney of New Vernon, New Jersey (Oratory Prep School).

THE REV. JOSEPH MURGAS SCHOLARSHIP — to Maureen A. Hirthler of Kingston, Pennsylvania (Bishop O'Reilly High School).

The names of the *Presidential Scholarships* and the recipients for 1976-80 are:

THE E. LAWRENCE BELLANTE SCHOLARSHIP — to Emily E. Grum of Endwell, New York (Maine-Endwell Senior High School).

THE JOSEPH P. HARPER SCHOLARSHIP — to Michael J. Corbley of Rockville, Maryland (Georgetown Preparatory School).

THE JOSEPH M. McDADE SCHOLARSHIP — to Robert J. Kelly of Sayville, New York (Seton Hall and Chaminade High Schools).

THE SEYMOUR NOGI SCHOLARSHIP — to Joseph M. Montella of Scranton, Pennsylvania (West Scranton High School).

THE HERMAN L. SENKER SCHOLARSHIP — to Joseph M. Velazquez of Allentown, Pennsylvania (Allentown Central Catholic High School).

The names of the *Presidential Scholarships* and the recipients for 1977-81 are:

THE FRANK C. BROWN SCHOLARSHIP — to Francis S. Zekoski of Pittston, Pennsylvania (Scranton Preparatory School).

THE SISTER MARIAN DENISE WALSH, I.H.M., SCHOLARSHIP — to Madeleine M. Lenox of Millington, New Jersey (Mount Saint Mary Academy).

THE MONSIGNOR ANDREW J. McGOWAN SCHOLARSHIP — to Donald T. Nardone of Wilkes Barre, Pennsylvania (Bishop Hoban High School).

THE AMELIA A. SURACI SCHOLARSHIP — to Belinda M. Juran of Glendale, New York (Grover Cleveland High School).

THE WILLIAM J. YOUNG SCHOLARSHIP — to Raymond J. Lillie of Morristown, New Jersey (Bayley-Ellard High School).

PIUS X SEMINARY SCHOLARSHIP

Dr. Arthur Jordan has initiated the Rev. James Flynn '58 Memorial Scholarship for the purpose of assisting University of Scranton students at Pius X Seminary in need of financial aid.

JESUIT COMMUNITY CONTRIBUTION

The contributed services of the members of the Jesuit Community of Scranton have totalled approximately $3,000,000 since 1942. This gift has enabled the University to offer many scholarships and has substantially aided in the building program.

The benefactors of the University are perpetually remembered in the Masses and prayers of the Jesuit Community at the University.

FUNDED SCHOLARSHIPS

Several funded scholarships have been established:

THE MARTHA FITCH SCHOLARSHIP FUND — In 1955 a legacy of $313,266 was bequeathed to the University in the Will of Miss Martha Fitch for scholarships. The income from this fund is used to provide scholarships for needy and deserving students.

THE MURPHY SCHOLARSHIP FUND — This Fund was established in 1957 at the request of Miss Margaret Murphy, who left the gift of $58,000 as a legacy. A marker has been placed in the University designating the gift as having been made by herself and her sister Katherine "in loving memory of our mother, father and brothers." The income of this Fund is used to provide scholarships for needy and deserving students.

JAMES J. CLAUSS SCHOLARSHIP FUND — Established in 1973, this $18,000 fund provides investment income to aid students, who require financial assistance, but do not qualify for most scholarship programs based on financial need. First consideration is given to Northeast Pennsylvania students.

JOHN M. ROBINSON SCHOLARSHIP FUND — An initial gift of $10,000 in 1974 and additional yearly gifts have established a $30,000 fund which is used to generate scholarship income for promising and deserving students. Scranton area residents receive first consideration.

ROBERT I. EDELSOHN SCHOLARSHIP FUND — In 1964 the sum of $25,000 was bequeathed in the Estate of Robert I. Edelsohn to be held in trust by the University of Scranton and to be invested and held as a perpetual fund, the income from which is to be applied to furnish scholarships to deserving students at the University of Scranton, who, without such assistance, might not be able to obtain the advantage of a college education.

BURKE FAMILY SCHOLARSHIPS — In 1966 and 1967, the sum of $50,000 was contributed to the Scholarship Endowment Fund of the University in the name of the Burke Family Foundation. In prior years, additional unfunded gifts had been made by the Burke Family Foundation. The income from the Fund is used to provide scholarships for needy and deserving students.

CHARLES E. MERRILL SCHOLARSHIPS — In 1969, the Charles E. Merrill Trust contributed $25,000 to the Scholarship Endowment Fund of the University. The income from this endowment is awarded for scholarship assistance to students of the Catholic faith.

JAMES I. KEARNEY SCHOLARSHIP FUND — This Fund was established in 1972 by bequest in the amount of $15,975 in the Estate of James I. Kearney. The income from this Fund is to be used for scholarships for students, one or both of whose parents were or are parishioners of St. Ignatius Parish, Kingston, Pennsylvania.

JESUIT COMMUNITY SCHOLARSHIP FUND — Since 1974, the Jesuit Community of the University of Scranton has given gifts of over $100,000 for scholarships. The principal is to be invested and the yearly income derived from this fund shall be used exclusively and entirely for financial aid to students attending the University of Scranton. Aside from the requisite scholastic aptitude, the sole criterion to be used in deciding who benefits from this aid shall be financial need.

REV. STEPHEN A. KOLLAR MEMORIAL SCHOLARSHIP FUND — A $94,000 fund has been established with a maximum of $500 per year made available to each eligible recipient. Applicants must be considered in the following priority: 1) Kinship to the deceased, the Rev. Stephen Kollar; 2) members of the Holy Family Parish Congregation of Scranton for a minimum of three years prior to filing the application; 3) in the event that there are no eligible candidates in categories (1) and (2), other needy students may be considered.

OTHER FUNDED ENDOWMENTS

JOHN J. LONG, S.J., FUND — Contributions to this Fund have been made by friends of the Very Rev. John J. Long, S.J., President of the University 1953-63, on the occasion of his Golden Jubilee in the Society of Jesus and later as a memorial after his death in 1971. The Fund, in the amount of $20,110 is invested and the income therefrom is used for projects and programs concerned with the spiritual growth of students.

RUTH H. GUNSTER MEMORIAL FUND — In 1971, Joseph F. Gunster established the Ruth H. Gunster Memorial Fund in loving memory of his wife. This fund, now in the amount of $61,037.50, is invested and the income is used for scholarships or other purposes for the University, excluding capital building.

AWARDS

DR. A.J. CAWLEY AWARD — In memory of Dr. A.J. Cawley of Pittston, Pa., a Fund was established by a legacy from his sister, Miss Ellen Cawley. The income therefrom is used to provide an award to a Physics Major each year in the amount of $100.

JOSEPH P. HARPER AWARD — In memory of Professor Joseph P. Harper, Professor of Physics, 1936-1967, a Fund was established in 1967. An annual award in the amount of $100 is given to a senior student majoring in Physics, upon the recommendation of the Physics Department and with the approval of the Director of Financial Aid. In making this Award, the Department of Physics presents to the student a citation reminding him of the high scholarly ideals, exemplary life, and dedicated service represented by Professor Harper.

Rev. William B. Hill, S.J., Ph.D., Professor of English, Academic Vice President

faculty directory

BOARD OF TRUSTEES

E. Lawrence Bellante
Richard E. Bennett
William J. Byron, S.J.
Richard P. Conaboy
Linda M. D'Andrea
Edward Glynn, S.J.
Charles G. Gonzalez, S.J.
David F. Hansen
Mrs. Irwin Isaacs
Sister M. Gabriel Kane, I.H.M.
Aloysius P. Kelley, S.J.
C. Richard Marshall
Joseph M. McDade
Laurence J. McGinley, S.J.
Msgr. Andrew J. McGowan
William C. McInnes, S.J.
Paul D. McNelis, S.J.
Donald D. Moyer
Carl A. Propes
Nicholas D. Saccone, D.D.S.
Mrs. Andrew J. Sordoni, III
Thomas H. Stahel, S.J.
William J. Walsh, S.J.
Joseph J. Wineburgh
Edgar A. Wren, Esq.

OFFICERS OF THE UNIVERSITY CORPORATION

William J. Byron, S.J., President
Marilyn Coar, Secretary
Robert T. Ryder, Treasurer

OFFICERS OF ADMINISTRATION

President of the University (1975)
William J. Byron, S.J. (1975)
Professor of Economics (1975)
A.B., Ph.L., M.A., St. Louis University;
S.T.B., S.T.L., Woodstock College;
Ph.D., University of Maryland

Vice President for Academic Affairs (1975)
William B. Hill, S.J. (1946-47; 1969)
Professor of English (1969)
A.B., Georgetown University; Ph.L.,
Woodstock College; S.T.L., Weston
College; M.A., Ph.D., Fordham University

Vice President for Business
and Management (1974)
John S. Flanagan (1974)
L/Colonel, U.S. Army-Ret.
Lecturer in Business Administration (1974)
A.B., College of William and Mary;
M.S., University of Alabama

Vice President for Development (1976)
Thomas A. McGoff (1964)
B.S., University of Scranton

Vice President for Student Affairs (1976)
John R. Gavigan, D. Et U.* (1976)
A.B., University of Scranton

Dean, College of Arts and Sciences (1970)
William J. Parente (1970)
Professor of Political Science (1973)
A.B., Xavier University; Ph.D.,
Georgetown University

Dean, Hanley College (1963)
Charles J. Buckley, D. Et U.* (1947)
Associate Professor of Business
Administration (1968)
B.S., University of Scranton;
M.B.A., New York University

Associate Dean, Hanley College (1976)
John J. Burns, S.J. (1976)
B.S., St. Joseph's College;
S.T.B., Woodstock College;
Ph.L., M.A., St. Louis University

Dean, Graduate School (1969)
Harry B. Strickland (1963)
Associate Professor of Business
Administration (1968); B.S. St. Vincent's
College; M.L., Ph.D., University of Pittsburgh

Dean, School of Management (1977)
Henry N. Amato (1977)
B.S., Southeastern Louisiana University;
M.S., Southwestern Louisiana University;
Ph.D., Tulane University

*The Pro Deo et Universitate Award for Twenty Years or More of Service to the University.

Director of Campus Ministries (1976)
Thomas D. Masterson, S.J. (1976)
Assistant Professor of History (1976)
A.B., M.A., Fordham University;
Ph.L., S.T.B., S.T.L., Woodstock College;
M.A., Ph.D., Georgetown University

Director of Continuing Education (1976)
Victor J. DeSantis (1976)
B.A., St. Bernard's College;
M.S., Siena College;
S.T.L., Gregorian University, Rome

Treasurer (1974)/Comptroller (1949)
Robert T. Ryder, D.Et U.* (1946)
Lecturer in Accounting (1963)
B.S., M.B.A., University of Scranton

PROFESSIONAL STAFF AND SERVICES

Harry M. Adelman (1976)
Programmer/Analyst (1976)
B.S., University of Scranton

John J. Baldi, D. Et U.* (1948)
Assistant to the President for
Planning and Research (1976)
Professor of Sociology (1968)
A.B., M.S.S.W., Boston College;
Advanced Curriculum Certificate,
University of Pennsylvania

Robert J. Burke (1961)
Director of Personnel Services (1974)
B.S., University of Scranton

Joseph M. Cannon (1959)
Director of the Counseling Center (1968)
Professor of Education (1974)
B.S., University of Scranton;
M.Ed., Pennsylvania State University;
Licensed Psychologist (1973)

Marilyn Coar, D. Et U.* (1948)
Executive Assistant to the President (1971)
A.B., Rosemont College

Michael M. Costello (1972)
Grants Officer (1976)
Lecturer in Communications (1972)
B.S., University of Scranton;
M.A., Ohio University;
M.B.A., University of Scranton

Christopher P. Cullen
Assistant to Dean, Graduate School
B.S., Holy Cross College

Jerome P. DeSanto (1976)
Programmer/Analyst (1976)
B.S., University of Scranton

Doris M. Edsell (1960)
Data Processing Supervisor (1975)

John J. Fitzpatrick, S.J. (1958-63; 1965)
Chaplain (1976)
A.B., M.A., S.T.B., Woodstock College;
M.S., University of Scranton

Gloria Gavin (1972)
Nurse
R.N., Mercy Hospital, Scranton, Pa.

Marian A. Gigliotti (1976)
Director of Alumni Relations (1976)
B.S., University of Scranton

Mary Hyland (1951)
Assistant Registrar for Graduate
School (1961)

Paul M. Jackowitz (1977)
Programmer/Analyst (1977)
B.S., University of Scranton

Walter J. Kanavy (1974)
Director of Computer Center (1974)
A.B., M.B.A., University of Scranton

Paul B. Kerrigan (1976)
Director of News Bureau (1976)
A.B., University of Scranton

Louis C. Kleff, S.J., D. Et U.* (1953)
Director of Physical Facilities
and Plant Development (1974)
A.B., M.A., Woodstock College

Kathleen R. Kopcik (1974)
Counselor (1974)
A.B., Marywood College;
M.S., University of Scranton

John W. Lange, S.J. (1964-66; 1974)
Counselor (1975)
A.B., Bellarmine College;
M.S., University of Scranton

Martin L. Langan (1974)
Director of Central Services (1975)
B.S., University of Scranton

Zim E. Lawhon (1964)
Colonel, U.S. Army-Ret.
Professor of Military Science (1964)
Registrar (1970)
A.B., M.S., Princeton University

John F. McNamara (1975)
Assistant Comptroller (1975)
B.S., University of Scranton

Bernard R. McIlhenny, S.J. (1958)
Director of Admissions (1966)
A.B., M.A., Loyola University, Chicago;
S.T.B., Woodstock College

Marianne McTighe, D. Et U. (1946)
Librarian (1956)
Associate Professor (1970)
B.S., M.A. in L.S., Marywood College

Albert M. Menichello (1954)
Chemistry Laboratory Supervisor (1977)
B.S., University of Scranton

Edward J. Miller (1970)
Director of Career Services (1974)
B.S., M.A., University of Scranton

Grace U. Miller (1969)
Assistant Director of Career Services (1974)

William J. Mizerak (1977)
Admissions Counselor (1977)
B.S., University of Scranton

Lawrence J. Morton (1969)
Dean of Students (1974)
A.B., St. Bonaventure University;
M.S., Syracuse University;
M.S., University of Scranton

Alice Murphy (1958)
Assistant to the Dean
College of Arts and Sciences (1976)

Robert J. Neary (1977)
Programming & Systems Manager (1977)
B.S., University of Scranton

Frank J. O'Hara, D. Et U.* (1925)
Moderator, Alumni Society (1970)
A.B., LL.D., University of Scranton;
M.A., LaSalle College

Frank Orlando (1976)
Assistant Registrar (1976)
B.S., Wilkes College;
M.B.A., University of Scranton

Frank D. Parker (1969)
Assistant Director of
Computer Center (1969)
B.S., University of Scranton

Sr. Joan Roccasalvo, D.S.J. (1976)
Associate Campus Minister and
Director of Liturgical Music
Lecturer in Music (1976)
B.S., Mus. Ed., Alverno College;
M.A., New York University
Studies, Villa Schifanoia Graduate
School of Fine Arts, Florence, Italy

J. Frank Reddington, M.D., D. Et U.* (1940)
College Physician (1940)
A.B., Holy Cross College;
M.D., Georgetown University

Thomas A. Santucci (1976)
EDP Coordinator (1976)

Frank W. Shutkufski (1966)
Superintendent of Buildings and
Grounds (1969)

Joseph M. Tierney (1964)
Director of Financial Aid (1964)
A.B., University of Scranton

Mark S. White, III (1976)
Admissions Counselor (1976)
B.S., University of Scranton

Gary N. Wodder (1974)
Director of Athletics (1974)
Assistant Professor, Chairman,
Department of Physical Education (1974)
B.S., M.A., Ph.D., Northwestern University

John H. Wunder, III, (1970)
Director of Security/Safety (1977)

Thaddeus D. Zabiegalski (1975)
Programmer/Analyst
B.S., King's College

Gary S. Zampano (1974)
Assistant Superintendent of Buildings
and Grounds/Management Analyst/
Purchasing (1975)
B.S., University of Scranton

FACULTY

PROFESSORS EMERITI

Umbay H. Burti, B.S., LL.D., D. Et U.* (1935-1975); Department of Chemistry

Stanley L. Chickson, M.A., (1958-1974) Department of Mathematics

Francis J. Gallagher, S.J., M.A., S.T.L., (1956-1968) Department of History

Richard F. Grady, S.J., Ph.D., L.H.D., D. Et U.* (1942-1970) Department of English

Helen P. Kelley, M.S.L.S., (1959-1976) Assistant Librarian

Antanas Kucas, Ph.D., D. Et U.* (1947-1967); Department of Modern Languages

Lawrence J. Lennon, Ph.D., D. Et U.* (1947-1974); Department of Education

Lawrence A. Mann, M.A., D. Et U.* (1949-1972); Department of Classical Languages

John P. McNicholas, S.J., Ph.D., (1953-1969); Department of Philosophy

Thomas G. Sheehan, M.A., D. Et U.* Sociology

Leonard N. Wolf, Ph.D., D. Et U.* (1937-1976); Department of Biology

PROFESSORS

Lloyd I. Abrams (1975)
Assistant Professor of Psychology (1975)
B.A., New York University;
Cand. Ph.D., University of Maine

Barry R. Anderson (1974)
Assistant Professor of Biology (1974)
B.S., State University of New York at Fredonia; M.S., Ph.D., Lehigh University

Panos Apostolidis (1977)
Associate Professor of Business Administration (1977)
B.B.A., University of Athens;
M.B.A., University of Houston;
Ph.D., University of Arkansas

Martin D. Appleton, D. Et U.* (1955)
Professor of Chemistry (1964)
Chairman, Department of Chemistry (1975);
B.S., University of Scranton; M.S., Ph.D., Pennsylvania State University

George V. Babcock (1963)
Associate Professor of Economics (1974)
A.B., M.A., Ph.L., Boston College;
M.B.A., New York University

Thomas E. Baker (1975)
Assistant Professor of Sociology (1975)
A.B., M.A., Virginia Commonwealth University

Galen L. Baril (1975)
Assistant Professor of Psychology (1977)
B.A., University of Nevada;
Cand. Ph.D., University of Maine

Carl P. Barone (1970)
Associate Professor of Education (1973)
Chairman, Department of Education (1974);
B.A., M.A., Colorado State College;
M.A., University of Wisconsin;
Ph.D., Ohio University

Edward F. Bartley, D. Et U.* (1938)
Chairman, Department of Mathematics/ Comp. Science (1977)
Professor of Mathematics (1968)
A.B., University of Scranton;
M.A., Columbia University

Edward G. Becker (1977)
Major, U.S. Army
Assistant Professor of Military Science (1977)
B.S., Pennsylvania State University

Thomas N. Beckish (1964)
Assistant Professor of Psychology (1967)
Assistant Director of Counseling Center (1964)
B.S., M.S., University of Scranton
Certified Psychologist

John J. Begley, S.J. (1975)
Associate Professor of Theology (1975)
A.B., M.A., Boston College;
Ph.L., S.T.L., Weston College;
S.T.D., Gregorian University, Rome

John A. Beidler (1964)
Professor of Mathematics/Computer Science (1976)
A.B., King's College; M.A., Lehigh University; Ph.D., Pennsylvania State University

Paul R. Beining, S.J. (1949-51; 1967)
Professor of Biology (1974)
B.S., Ph.L., Spring Hill College;
S.T.L., Woodstock College; M.S., Ph.D., The Catholic University of America

J. Brian Benestad (1976)
Instructor of Political Theory and Social Ethics (1976)
A.B., Assumption College;
S.T.L., Gregorian University;
Cand. Ph.D., Boston College

Robert M. Bessoir (1968)
Associate Professor of Physical Education (1973);
Basketball Coach (1972);
B.S., University of Scranton;
M.S., East Stroudsburg State College

Mrigen Bose (1968)
Associate Professor of Business Administration (1977)
B.S., Patna University; M.A. (Comm.)
M.A. (Econ.), University of Calcutta;
M.S., University of Kentucky;
Ph.D., University of Utah

Richard J. Bourcier (1968)
Associate Professor of Foreign Languages (1973);
A.B., Assumption College;
M.A., Laval University

Everett R. Brown (1975)
Assistant Professor of Business Administration (1975)
B.S., M.E., Stevens Institute of Technology;
M.B.A., Ed.D., Temple University
Registered Professional Engineer in Pennsylvania

James P. Buchanan (1977)
Assistant Professor of Psychology (1977)
B.A., The Johns Hopkins University;
M.A., Ph.D., University of California, Los Angeles

John J. Callaghan, D. Et U.* (1955)
Professor of Biology (1972)
B.S., M.S., University College, Cork, National University of Ireland;
Ph.D., Pennsylvania State University

Michael C. Cann (1975)
Assistant Professor of Chemistry (1975)
B.A., Marist College;
M.S., Ph.D., State University of New York at Stony Brook

Edward J. Capestany (1968)
Professor of Philosophy (1974)
B.S., M.A., University of Comillas, Spain;
Ph.D., University of Ottawa

Salvatore Capobianco (1976)
Assistant Professor of Psychology (1976)
B.A., M.A., University of Kansas
Ph.D., Rutgers University

Ellen M. Casey (1969)
Associate Professor of English (1974)
B.S., Loyola University, Chicago;
M.A., University of Iowa;
Ph.D., University of Wisconsin

Stephen J. Casey (1969)
Assistant Professor of Theology (1972)
Chairman, Department of Theology/Religious Studies (1977)
A.B., Iona College;
M.A., Marquette University

Raymond W. Champagne, Jr. (1967)
Associate Professor of History (1977)
A.B., Providence College;
M.S., Duke University;
Ph.D., Loyola University, Chicago

Frank A. Cimini, D. Et U.* (1941)
Professor of Foreign Languages (1972)
Acting Chairman, Department of Foreign Languages (1976)
A.B., University of Scranton;
M.A., Fordham University

Orestes P. Coccia, S.J. (1975)
Assistant Professor of Theology (1975)
A.B., Fordham University;
Th.B., Regis College, Toronto;
Ph.D., University of Strasbourg

James J. Conlin, S.J. (1967)
Professor of Sociology (1970)
A.B., Ph.L., M.A., Ph.D., St. Louis University;
S.T.L., Woodstock College

Salvatore J. Corso (1976)
Assistant Professor of Education (1976)
B.S., St. Joseph's College;
M.Ed., Ed.D., Temple University

Francis H. Curtis (1966)
Assistant Professor of Education (1966);
B.S., M.Ed., Pennsylvania State University

Thomas W. Decker (1977)
Assistant Professor of Human Resources (1977)
B.A., Dickinson College;
M.Ed., University of Virginia;
Ph.D., Ohio State University

Donald J. Dellario (1974)
Assistant Professor of Human Services (1974)
A.B., The Catholic University of America;
M.S., University of Scranton;
Ph.D., University of Wisconsin

Michael D. DeMichele (1967)
Professor of History (1974); Chairman, Department of History/Political Science (1976)
B.S., University of Scranton;
M.A., Ph.D., Pennsylvania State University

Vito DelVecchio (1969)
Professor of Biology (1977)
B.A., University of Scranton;
M.S., St. John's University;
Ph.D., Hahnemann Medical College Graduate School

Anthony J. DiStefano (1968)
Associate Professor of Physics (1977)
B.E.E., Brooklyn Polytechnic Institute;
M.A., Columbia University;
Ph.D., Stevens Institute of Technology

Joseph C. Dougherty (1967)
Professor of Political Science (1967)
A.B., St. Charles College;
M.A., Ph.D., Georgetown University

John J. Dunstone (1966)
Professor of Psychology (1974)
B.S., Pennsylvania State University;
M.S., Ph.D., University of Massachusetts

John L. Earl, III (1964)
Professor of History (1972)
B.S., M.A., Villanova University;
Ph.D., Georgetown University

Gary E. Eichelsdorfer (1965)
Assistant Professor of Mathematics (1968)
A.B., Gannon College;
M.A., University of Detroit

Joseph T. Evans, D. Et U.* (1953)
Professor (1965), Chairman, Department of Biology (1969; 1972; 1975)
B.S., University of Scranton;
M.S., Ph.D., The Catholic University of America

Paul F. Fahey, Jr. (1968)
Associate Professor of Physics (1973)
B.S., University of Scranton;
M.S., Ph.D., University of Virginia

Matthew J. Fairbanks (1960)
Professor of Philosophy (1970)
B.S., M.A., Loyola University, Chicago;
Ph.D., Notre Dame University

Matthew C. Farrell (1967)
Professor of Education (1976)
A.B., M.S., University of Scranton;
Ph.D., Fordham University

John Quentin Feller (1969)
Professor of History (1976)
A.B., Loyola College; M.A., Ph.D., The Catholic University of America

Joseph A. Fusaro (1974)
Assistant Professor of Education (1974)
B.A., Rider College; M.Ed., University of Vermont; Ed.D., State University of New York at Albany

Edward Gannon, S.J. (1964)
Professor of Philosophy (1964); Editor, Best Sellers (1975);
A.B., Georgetown University;
M.A., Fordham University;
Ph.L., S.T.L., Woodstock College;
Ph.D., University of Louvain

Thomas M. Garrett (1960)
Professor of Philosophy (1970)
A.B., M.A., Ph.L., Gonzaga University;
S.T.L., Weston College;
Ph.D., Gregorian University, Rome

Thomas W. Gerrity (1976)
Assistant Professor of Education (1976)
B.S., University of Pennsylvania;
M.S., University of Scranton;
Ed.D., Columbia University

A. John Giunta (1960)
Professor of Business Administration (1967)
B.S., Harpur College;
M.S., Ph.D., Syracuse University

Leonard G. Gougeon (1974)
Assistant Professor of English (1974)
B.A., St. Mary's University, Halifax;
M.A., Ph.D., University of Massachusetts

Ralph W. Grambo, Jr. (1973)
Assistant Professor of Business Administration (1973)
B.S., University of Scranton;
M.B.A., Ph.D., University of Pennsylvania

Ronald J. Grambo (1977)
Instructor in Business Administration (1977)
B.S., M.B.A., University of Scranton

Edward F. Grubbs, Jr. (1975)
Lt. Colonel, U.S. Army
Professor of Military Science (1975)
B.S., U.S., Military Academy;
M.A., New York University

Walter Haab (1960)
Professor of Chemistry (1968)
B.S., Swiss Federal Institute of Technology;
M.S., University of Alberta;
Ph.D., University of California

Joseph M. Hamernick, S.J. (1967)
Assistant Professor of English
and Speech (1970)
B.S., St. Joseph's College;
S.T.B., Woodstock College;
M.A., The Catholic University of America

Maurice I. Hart, Jr. (1963)
Professor of Chemistry (1971)
A.B., Maryknoll College;
M.S., Ph.D., Fordham University

Christine D. Herrick (1977)
Assistant Professor of Education (1977)
B.A., M.Ed., Pennsylvania State University;
Ph.D., University of Pittsburgh

Francis X.J. Homer (1968)
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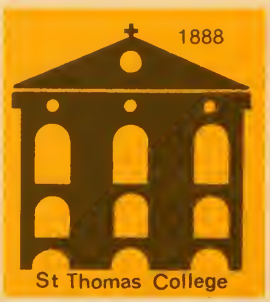
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